

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
27 May 2004 (27.05.2004)

PCT

(10) International Publication Number
WO 2004/043368 A2

- (51) International Patent Classification⁷: **A61K** [US/US]; 709 Swedeland Road, King of Prussia, PA 19406 (US).
- (21) International Application Number: **PCT/US2003/035357** (74) Agents: **HALL, Linda, E. et al.**; SmithKline Beecham Corporation, Corporate Intellectual Property, UW2220, 709 Swedeland Road, P.O. Box 1539, King of Prussia, PA 19406-0939 (US).
- (22) International Filing Date: **6 November 2003 (06.11.2003)**
- (25) Filing Language: **English** (81) Designated States (*national*): AE, AG, AL, AU, BA, BB, BR, BZ, CA, CN, CO, CR, CU, DM, DZ, EC, EG, GD, GE, HR, HU, ID, IL, IN, IS, JP, KP, KR, LC, LK, LR, LT, LV, MA, MG, MK, MN, MX, NO, NZ, OM, PH, PL, RO, SC, SG, TN, TT, UA, US, UZ, VN, YU, ZA.
- (26) Publication Language: **English**
- (30) Priority Data:
60/424,128 6 November 2002 (06.11.2002) US
60/424,162 6 November 2002 (06.11.2002) US
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- Published:**
— *without international search report and to be republished upon receipt of that report*
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: **SULFONAMIDES**

(57) Abstract: The present invention relates to sulfonamides, pharmaceutical compositions containing them, and their use as antagonists of urotensin II.

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SULFONAMIDES

FIELD OF THE INVENTION

The present invention relates to sulfonamides, pharmaceutical compositions containing
5 them and their use as urotensin II antagonists

BACKGROUND OF THE INVENTION

The integrated control of cardiovascular homeostasis is achieved through a
combination of both direct neuronal control and systemic neurohormonal activation. Although
10 the resultant release of both contractile and relaxant factors is normally under stringent
regulation, an aberration in this *status quo* can result in cardiohemodynamic dysfunction with
pathological consequences.

The principal mammalian vasoactive factors that comprise this neurohumoral axis, namely
angiotensin-II, endothelin-1, norepinephrine, all function via an interaction with specific G-
15 protein coupled receptors (GPCR). Urotensin-II, represents a novel member of this
neurohumoral axis.

In the fish, this peptide has significant hemodynamic and endocrine actions in diverse
end-organ systems and tissues:

- smooth muscle contraction
20 both vascular and non-vascular in origin including smooth muscle preparations from
the gastrointestinal tract and genitourinary tract. Both pressor and depressor activity
has been described upon systemic administration of exogenous peptide
- osmoregulation:
effects which include the modulation of transepithelial ion (Na^+ , Cl^-) transport.
25 Although a diuretic effect has been described, such an effect is postulated to be
secondary to direct renovascular effects (elevated GFR)
- metabolism:
urotensin-II influences prolactin secretion and exhibits a lipolytic effect in fish
(activating triacylglycerol lipase resulting in the mobilization of non-esterified free
30 fatty acids)
(Pearson, *et. al. Proc. Natl. Acad. Sci. (U.S.A.)* 1980, 77, 5021; Conlon, *et. al. J. Exp.*
Zool. 1996, 275, 226.)

In studies with human Urotensin-II it was found that it:

- was an extremely potent and efficacious vasoconstrictor
- exhibited sustained contractile activity that was extremely resistant to wash out
- had detrimental effects on cardiac performance (myocardial contractility)

5 Human Urotensin-II was assessed for contractile activity in the rat-isolated aorta and was shown to be the most potent contractile agonist identified to date. Based on the *in vitro* pharmacology and *in vivo* hemodynamic profile of human Urotensin-II it plays a pathological role in cardiovascular diseases characterized by excessive or abnormal vasoconstriction and myocardial dysfunction. (Ames *et. al. Nature* 1999, 401, 282; Douglas & Ohlstein (2000).
10 Trends Cardiovasc. Med., 10(6):229-37).

Compounds that antagonize the Urotensin-II receptor may be useful in the treatment of congestive heart failure, stroke, ischemic heart disease (angina, myocardial ischemia), cardiac arrhythmia, hypertension (essential and pulmonary), COPD, fibrosis (e.g. pulmonary fibrosis), restenosis, atherosclerosis, dyslipidemia, asthma, (Hay DWP, Luttmann MA, Douglas SA:
15 2000, Br J Pharmacol: 131; 10-12) neurogenic inflammation and metabolic vasculopathies all of which are characterized by abnormal vasoconstriction and/or myocardial dysfunction. Urotensin antagonists may provide end organ protection in hypersensitive cohorts in addition to lowering blood pressure.

Since U-II and GPR14 are both expressed within the mammalian CNS (Ames *et. al. Nature* 1999, 401, 282), they also may be useful in the treatment of addiction, schizophrenia,
20 cognitive disorders/Alzheimers disease, (Gartlon J. Psychopharmacology (Berl) 2001 June; 155(4):426-33), impulsivity, anxiety, stress, depression, pain, migraine, neuromuscular function, parkinsons, movement disorders, sleep-wake cycle, and incentive motivation (Clark *et al. Brain Research* 923 (2001) 120-127.

25 Functional U-II receptors are expressed in rhabdomyosarcomas cell lines and therefore may have oncological indications. Urotensin may also be implicated in various metabolic diseases such as diabetes (Ames *et. al. Nature* 1999, 401, 282, Nothacker *et al., Nature Cell Biology* 1: 383-385, 1999) and in various gastrointestinal disorders, bone, cartilage, and joint disorders (e.g. arthritis and osteoporosis); and genito-urinary disorders. Therefore, these
30 compounds may be useful for the prevention (treatment) of gastric reflux, gastric motility and ulcers, arthritis, osteoporosis and urinary incontinence.

SUMMARY OF THE INVENTION

In one aspect this invention provides for sulfonamides and pharmaceutical
35 compositions containing them.

In a second aspect, this invention provides for the use of sulfonamides as antagonists of urotensin II, and as inhibitors of urotensin II.

In another aspect, this invention provides for the use of sulfonamides for treating conditions associated with urotensin II imbalance.

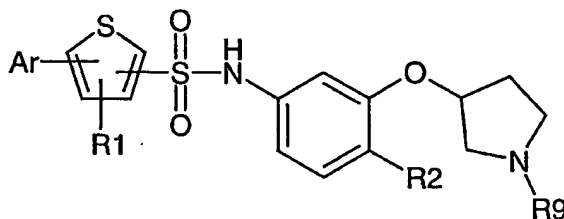
5 In yet another aspect, this invention provides for the use of sulfonamides for the treatment of congestive heart failure, stroke, ischemic heart disease (angina, myocardial ischemia), cardiac arrhythmia, hypertension (essential and pulmonary), renal disease (acute and chronic renal failure/end stage renal disease) along with peripheral vascular disease (male
10 erectile dysfunction, diabetic retinopathy, intermittent claudication/ischemic limb disease) and ischemic/hemorrhagic stroke, COPD, restenosis, asthma, neurogenic inflammation, migraine, metabolic vasculopathies, bone/cartilage/joint diseases, arthritis and other inflammatory diseases, fibrosis (e.g. pulmonary fibrosis), sepsis, atherosclerosis, dyslipidemia, addiction,
15 schizophrenia, cognitive disorders/Alzheimers disease, impulsivity, anxiety, stress, depression, parkinsons, movement disorders, sleep-wake cycle, incentive motivation, pain, neuromuscular function, diabetes, gastric reflux, gastric motility disorders, ulcers and genitourinary diseases.

The urotensin antagonist may be administered alone or in conjunction with one or more other therapeutic agents, said agents being selected from the group consisting of endothelin
20 receptor antagonists, angiotensin converting enzyme (ACE) inhibitors, A-II receptor antagonists, vasopeptidase inhibitors, diuretics, digoxin, and dual non-selective β -adrenoceptor and α_1 -adrenoceptor antagonists.

Other aspects and advantages of the present invention are described further in the following detailed description of the preferred embodiments thereof.

DETAILED DESCRIPTION OF THE INVENTION

25 The present invention provides for compounds of Formula (I):



Formula (I)

30 wherein:

R₁ is hydrogen, halogen, or C₁₋₆ alkyl;

Ar is phenyl, pyrazolyl, thiazolyl, dibenzofuranyl, benzodioxolyl, quinolinyl, or naphthalenyl, all of which may be substituted or unsubstituted by one or two of the following: halogen, CN, S(C₁₋₆ alkyl), CF₃, OCF₃, SCF₃, C₁₋₆ alkyl, Ph, OPh, C₁₋₆ alkoxy, CO₂(C₁₋₆ alkyl), NR₅R₆,

5 NR₅COR₆, CONR₅R₆, COR₅, NO₂, C₁₋₃ alkylenedioxy, CH₂OH or CH₂CN;

R₂ is hydrogen, halogen, or CF₃.

R₅ and R₆ are independently hydrogen or C₁₋₆ alkyl;

R₉ is hydrogen or C₁₋₆ alkyl;

or a pharmaceutically acceptable salt thereof.

10

When used herein, the term "alkyl" includes all straight chain and branched isomers.

Representative examples thereof include methyl, ethyl, *n*-propyl, *iso*-propyl, *n*-butyl, *sec*-butyl, *iso*-butyl, *t*-butyl, *n*-pentyl and *n*-hexyl.

When used herein, the terms 'halogen' and 'halo' include fluorine, chlorine, bromine and
15 iodine, and fluoro, chloro, bromo and iodo, respectively.

Preferably Ar is phenyl.

Preferred substituents for Ar are hydrogen, CN, halogen, CF₃, CO₂CH₃, C₁₋₂alkoxy, C=O, NHCOCH₃, CH₂O, C₁₋₂alkyl, SCH₃, O-CF₃, CH₂CN, -C(CH₃)₃, NH₃, Ph, OPh, NO₂, CH₂OH, or N-C(O)O-CH(CH₃)₃.

20

R₂ is preferably hydrogen, Cl, or CF₃.

R₁ is preferably hydrogen, BR, or Cl.

R₉ is preferably C₁₋₂ alkyl.

Preferred compounds are :

5-chloro-N-[3-{{[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl]-3-[4-
25 (trifluoromethyl)phenyl]-2-thiophenesulfonamide;

5,5'-dichloro-N-[3-{{[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl]-2,3'-
bithiophene-2'-sulfonamide;

5-chloro-3-(2,4-dichlorophenyl)-N-[3-{{[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-
(trifluoromethyl)phenyl]-2-thiophenesulfonamide;

30

5-chloro-3-(2,4-difluorophenyl)-N-[3-{{[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-
(trifluoromethyl)phenyl]-2-thiophenesulfonamide;

5-chloro-3-(2-methylphenyl)-N-[3-{{[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-
(trifluoromethyl)phenyl]-2-thiophenesulfonamide;

- 5-chloro-3-(2,5-dimethylphenyl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-chloro-3-(2-chlorophenyl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5 5-chloro-3-[5-chloro-2-(methyloxy)phenyl]-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-chloro-3-(2,5-difluorophenyl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-chloro-3-[2-methyl-4-(methyloxy)phenyl]-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 10 5-chloro-3-dibenzo[b,d]furan-2-yl-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-chloro-3-[2-methyl-8-(methyloxy)-5-quinoliny]-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 15 5-chloro-3-(6-methyl-1,3-benzodioxol-5-yl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-chloro-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-3-{4-[(trifluoromethyl)oxy]phenyl}-2-thiophenesulfonamide;
- 5-chloro-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-3-[2-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 20 5-chloro-4-[3-(cyanomethyl)phenyl]-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-chloro-4-[4-(cyanomethyl)phenyl]-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 25 5-chloro-3-[2-(cyanomethyl)phenyl]-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-chloro-3-[4-(cyanomethyl)phenyl]-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-chloro-3-[4-(1,1-dimethylethyl)phenyl]-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 30 5-chloro-3-[4-(dimethylamino)phenyl]-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 3-[5-chloro-2-{{3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl}amino}sulfonyl]-3-thienyl]benzamide;

- 5-chloro-3-(3-chloro-4-fluorophenyl)-N-(4-chloro-3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-2-thiophenesulfonamide;
- 5-chloro-4-(3-chloro-4-fluorophenyl)-N-(4-chloro-3-([(3S)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-2-thiophenesulfonamide;
- 5 4-chloro-N-(4-chloro-3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-5-[4-(cyanomethyl)phenyl]-2-thiophenesulfonamide;
- 4-chloro-N-(4-chloro-3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-5-(4-methylphenyl)-2-thiophenesulfonamide;
- 5-chloro-N-(4-chloro-3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-4-phenyl-2-
- 10 thiophenesulfonamide;
- 4-(2-aminophenyl)-5-chloro-N-(4-chloro-3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-2-thiophenesulfonamide;
- 4-(3-aminophenyl)-5-chloro-N-(4-chloro-3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-2-thiophenesulfonamide;
- 15 5-chloro-N-(4-chloro-3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-4-[4-(methyloxy)phenyl]-2-thiophenesulfonamide;
- 4-(4-biphenyl)-5-chloro-N-(4-chloro-3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-2-thiophenesulfonamide;
- 5-chloro-N-(4-chloro-3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-4-[4-(phenyloxy)phenyl]-
- 20 2-thiophenesulfonamide;
- 5-chloro-N-(4-chloro-3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-4-[4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- N-{3-[2-chloro-5-([3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]amino)sulfonyl]-3-thienyl}phenyl}acetamide;
- 25 5-chloro-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-4-[4-(methylthio)phenyl]-2-thiophenesulfonamide;
- 5-chloro-4-[2-methyl-8-(methyloxy)-5-quinolinyl]-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-chloro-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-4-[2-
- 30 (trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-chloro-4-dibenzo[b,d]furan-4-yl-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-chloro-N-(4-chloro-3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-4-[2-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;

- N-[3-(2-chloro-5-{{(4-chloro-3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}phenyl)amino}sulfonyl}-3-thienyl)phenyl]acetamide;
- 5-chloro-N-(4-chloro-3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}phenyl)-4-[2-methyl-8-(methyloxy)-5-quinolinyl]-2-thiophenesulfonamide;
- 5 4-chloro-5-[3-(hydroxymethyl)phenyl]-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-(3-aminophenyl)-4-chloro-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 4-chloro-5-dibenzo[b,d]furan-4-yl-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 10 4-chloro-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-5-[4-(methylthio)phenyl]-2-thiophenesulfonamide;
- 4-chloro-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-5-[2-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 15 N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-5-[4-(methylthio)phenyl]-2-thiophenesulfonamide;
- 5-(6-methyl-1,3-benzodioxol-5-yl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-[3-(cyanomethyl)phenyl]-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 20 5-[4-(cyanomethyl)phenyl]-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 4-chloro-N-(4-chloro-3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}phenyl)-5-[2-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 25 4-chloro-N-(4-chloro-3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}phenyl)-5-dibenzo[b,d]furan-4-yl-2-thiophenesulfonamide;
- N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-5-phenyl-2-thiophenesulfonamide;
- 5-[3-(methyloxy)phenyl]-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 30 N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-5-[3-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 2,5-dichloro-4-[3-(methyloxy)phenyl]-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-3-thiophenesulfonamide;

- 5-chloro-4-(3-cyanophenyl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-chloro-4-[3-(methyloxy)phenyl]-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5 5-chloro-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-4-[3-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-chloro-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-3-(2-naphthalenyl)-2-thiophenesulfonamide;
- 5-chloro-3-(3,5-difluorophenyl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide; ;
- 10 3-[5-chloro-2-{{[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]amino}sulfonyl}-3-thienyl]benzoic acid;
- 5-chloro-3-(3-chlorophenyl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 15 5-chloro-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-3-{3-[(trifluoromethyl)oxy]phenyl}-2-thiophenesulfonamide;
- 5-chloro-3-(3,4-dichlorophenyl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-chloro-N-(4-chloro-3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}phenyl)-3-(3-cyanophenyl)-2-thiophenesulfonamide;
- 20 5-chloro-N-(4-chloro-3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}phenyl)-3-[3-(methyloxy)phenyl]-2-thiophenesulfonamide;
- 5-chloro-N-(4-chloro-3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}phenyl)-3-(3-chlorophenyl)-2-thiophenesulfonamide;
- 25 5-chloro-N-(4-chloro-3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}phenyl)-3-(3-fluorophenyl)-2-thiophenesulfonamide;
- N-[3-[3-chloro-5-{{[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]amino}sulfonyl}-2-thienyl]phenyl]acetamide;
- N-[2-[2-chloro-5-{{[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]amino}sulfonyl}-3-thienyl]phenyl]acetamide;
- 30 Methyl 3-{{[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]amino}sulfonyl}-4-phenyl-5-(trifluoromethyl)-2-thiophenecarboxylate; ;
- N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-4-phenyl-5-(trifluoromethyl)-3-thiophenesulfonamide;

3-(3-cyanophenyl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide; and
 N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-5-(2-methyl-1,3-thiazol-4-yl)-2-thiophenesulfonamide.

5

More Preferred compounds are:

- 5-chloro-3-(4-cyanophenyl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
 3-(4-acetylphenyl)-5-chloro-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
 10 5-chloro-3-(4-chlorophenyl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
 5-chloro-3-[4-(methyloxy)phenyl]-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
 15 5-chloro-3-(4-formylphenyl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
 N-[4-[5-chloro-2-({[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]amino)sulfonyl]-3-thienyl]phenyl]acetamide;
 5-chloro-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-4-[4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
 20 4-(4-acetylphenyl)-5-chloro-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
 5-chloro-4-(4-fluorophenyl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
 25 5-chloro-4-[4-(methyloxy)phenyl]-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
 N-[4-[2-chloro-5-({[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]amino)sulfonyl]-3-thienyl]phenyl]acetamide; ;
 5-chloro-4-(2,4-dichlorophenyl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
 30 5-chloro-4-(2,4-difluorophenyl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
 N-[3-[5-chloro-2-({[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]amino)sulfonyl]-3-thienyl]phenyl]acetamide;

- 5-chloro-N-[3-{{[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl}-3-[4-(methylthio)phenyl]-2-thiophenesulfonamide;
- 5-chloro-4-[4-(1,1-dimethylethyl)phenyl]-N-[3-{{[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl}-2-thiophenesulfonamide;
- 5 5-chloro-4-[4-(dimethylamino)phenyl]-N-[3-{{[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl}-2-thiophenesulfonamide;
- 4-chloro-N-(4-chloro-3-{{[(3R)-1-methyl-3-pyrrolidinyl]oxy}phenyl)-5-[3-fluoro-4-(methyloxy)phenyl]-2-thiophenesulfonamide;
- 4-chloro-N-(4-chloro-3-{{[(3R)-1-methyl-3-pyrrolidinyl]oxy}phenyl)-5-(2-fluorophenyl)-2-
- 10 thiophenesulfonamide;
- 5-chloro-N-(4-chloro-3-{{[(3R)-1-methyl-3-pyrrolidinyl]oxy}phenyl)-4-(4-cyanophenyl)-2-thiophenesulfonamide;
- 5-chloro-N-(4-chloro-3-{{[(3R)-1-methyl-3-pyrrolidinyl]oxy}phenyl)-4-(4-chlorophenyl)-2-thiophenesulfonamide;
- 15 5-chloro-N-(4-chloro-3-{{[(3R)-1-methyl-3-pyrrolidinyl]oxy}phenyl)-4-(4-fluorophenyl)-2-thiophenesulfonamide;
- 5-chloro-N-(4-chloro-3-{{[(3R)-1-methyl-3-pyrrolidinyl]oxy}phenyl)-4-[3-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-chloro-N-(4-chloro-3-{{[(3R)-1-methyl-3-pyrrolidinyl]oxy}phenyl)-4-(3-chlorophenyl)-2-
- 20 thiophenesulfonamide;
- 5-chloro-N-(4-chloro-3-{{[(3R)-1-methyl-3-pyrrolidinyl]oxy}phenyl)-4-[3-(methyloxy)phenyl]-2-thiophenesulfonamide;
- 5-Chloro-4-(2-methylphenyl)-N-[3-{{[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl}-2-thiophenesulfonamide;
- 25 5-chloro-4-(2,5-dimethylphenyl)-N-[3-{{[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl}-2-thiophenesulfonamide;
- 5-chloro-4-[2-(methyloxy)phenyl]-N-[3-{{[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl}-2-thiophenesulfonamide;
- 5-chloro-N-[3-{{[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl}-4-{4-
- 30 [(trifluoromethyl)oxy]phenyl}-2-thiophenesulfonamide;
- 5-chloro-4-[2-methyl-4-(methyloxy)phenyl]-N-[3-{{[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl}-2-thiophenesulfonamide;
- 4-[3,4-bis(methyloxy)phenyl]-5-chloro-N-(4-chloro-3-{{[(3R)-1-methyl-3-pyrrolidinyl]oxy}phenyl)-2-thiophenesulfonamide;

- 5-chloro-N-(4-chloro-3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-4-[2-methyl-4-(methyloxy)phenyl]-2-thiophenesulfonamide;
- 5-chloro-4-[4-(hydroxymethyl)phenyl]-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5 5-chloro-4-[3-(hydroxymethyl)phenyl]-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 4-(4-aminophenyl)-5-chloro-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 4-(2-aminophenyl)-5-chloro-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 10 5-chloro-N-(4-chloro-3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-4-[2-(cyanomethyl)phenyl]-2-thiophenesulfonamide;
- N-(4-bromo-3-([(3R)-1-methylpyrrolidin-3-yl]oxy)phenyl)-5-chloro-4-(3-chloro-4-fluorophenyl)thiophene-2-sulfonamide;
- 15 4-chloro-5-[3-(cyanomethyl)phenyl]-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 4-chloro-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-5-[4-([(trifluoromethyl)oxy]phenyl)-2-thiophenesulfonamide];
- 4-chloro-5-[2-methyl-8-(methyloxy)-5-quinoliny]-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 20 N-[3-[5-([(3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]amino)sulfonyl]-2-thienyl]phenyl]acetamide;
- N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-5-[4-([(trifluoromethyl)oxy]phenyl)-2-thiophenesulfonamide];
- 25 5-[2-(cyanomethyl)phenyl]-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 4-chloro-N-(4-chloro-3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-5-(4-chlorophenyl)-2-thiophenesulfonamide;
- 5-[3,5-bis(trifluoromethyl)phenyl]-4-chloro-N-(4-chloro-3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-2-thiophenesulfonamide;
- 30 4-chloro-N-(4-chloro-3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-5-(4-fluorophenyl)-2-thiophenesulfonamide;
- 4-chloro-N-(4-chloro-3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-5-[4-(methyloxy)phenyl]-2-thiophenesulfonamide;

- 4-chloro-N-(4-chloro-3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}phenyl)-5-(2-methylphenyl)-2-thiophenesulfonamide;
- 4-chloro-N-(4-chloro-3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}phenyl)-5-[2-methyl-4-(methyloxy)phenyl]-2-thiophenesulfonamide;
- 5 4-chloro-N-(4-chloro-3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}phenyl)-5-(4-cyanophenyl)-2-thiophenesulfonamide;
- 4-chloro-N-(4-chloro-3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}phenyl)-5-{3-[(trifluoromethyl)oxy]phenyl}-2-thiophenesulfonamide;
- 5-[3,4-bis(methyloxy)phenyl]-4-chloro-N-(4-chloro-3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}phenyl)-2-thiophenesulfonamide;
- 10 4-chloro-N-(4-chloro-3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}phenyl)-5-[2-(cyanomethyl)phenyl]-2-thiophenesulfonamide;
- 5-(3-cyanophenyl)-N-[3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 15 4-bromo-2-chloro-N-[3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl]-5-[3-(trifluoromethyl)phenyl]-3-thiophenesulfonamide;
- 5-chloro-N-[3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl]-3-phenyl-2-thiophenesulfonamide;
- 5-chloro-3-[3-(methyloxy)phenyl]-N-[3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 20 5-chloro-3-(4-fluorophenyl)-N-[3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 3-[3,5-bis(trifluoromethyl)phenyl]-5-chloro-N-[3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 25 5-chloro-3-(3-fluorophenyl)-N-[3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 3-(3-acetylphenyl)-5-chloro-N-[3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 30 3-[3,4-bis(methyloxy)phenyl]-5-chloro-N-[3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-chloro-3-(3,5-dichlorophenyl)-N-[3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-chloro-3-(3-fluoro-4-methylphenyl)-N-[3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;

- 5-chloro-3-(3,4-difluorophenyl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-chloro-3-(3,4-dimethylphenyl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5 3-(1,3-benzodioxol-5-yl)-5-chloro-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-chloro-4-(3,5-dichlorophenyl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 4-chloro-5-(4-methylphenyl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 10 4-chloro-5-[2-(methyloxy)phenyl]-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 4-chloro-5-(2-fluorophenyl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 15 4-chloro-5-(3,4-dimethylphenyl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 4-chloro-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-5-phenyl-2-thiophenesulfonamide;
- 4-chloro-5-[5-chloro-2-(methyloxy)phenyl]-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 20 4-chloro-5-[3-methyl-4-(methyloxy)phenyl]-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- N-[3-[2-chloro-5-{{3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl}amino)sulfonyl}-3-thienyl]phenyl]-2-methylpropanamide;
- 25 N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-5-[1-methyl-5-(trifluoromethyl)-1H-pyrazol-3-yl]-2-thiophenesulfonamide;
- 4-(3-cyanophenyl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-chloro-N-(4-chloro-3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}phenyl)-4-(3,5-dichlorophenyl)-2-thiophenesulfonamide;
- 30 5-chloro-4-(4-cyanophenyl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-chloro-4-(4-chlorophenyl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;

- 5-chloro-4-(4-formylphenyl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-chloro-4-[2-(cyanomethyl)phenyl]-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5 5-chloro-3-[3-(cyanomethyl)phenyl]-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-chloro-N-(4-chloro-3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}phenyl)-4-(3,4-difluorophenyl)-2-thiophenesulfonamide;
- 5-chloro-4-(2,5-difluorophenyl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 10 5-chloro-4-(2-chlorophenyl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-chloro-4-[5-chloro-2-(methyloxy)phenyl]-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-chloro-4-[5-chloro-2-(methyloxy)phenyl]-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 15 5-chloro-4-(6-methyl-1,3-benzodioxol-5-yl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-chloro-N-(4-chloro-3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}phenyl)-4-(3,4-dichlorophenyl)-2-thiophenesulfonamide;
- 5-chloro-4-(3-chloro-4-fluorophenyl)-N-(4-chloro-3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}phenyl)-2-thiophenesulfonamide;
- 20 5-chloro-N-(4-chloro-3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}phenyl)-4-(6-methyl-1,3-benzodioxol-5-yl)-2-thiophenesulfonamide;
- 5-chloro-N-(4-chloro-3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}phenyl)-4-(4-methyl-3-nitrophenyl)-2-thiophenesulfonamide;
- 25 4-chloro-5-[2-(cyanomethyl)phenyl]-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 4-chloro-5-[4-(cyanomethyl)phenyl]-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 4-chloro-5-[2-methyl-4-(methyloxy)phenyl]-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 30 4-chloro-5-(5-methyl-1,3-benzodioxol-4-yl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-dibenzo[b,d]furan-4-yl-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;

- 5-(3-acetylphenyl)-4-chloro-N-(4-chloro-3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-2-thiophenesulfonamide;
- 4-chloro-N-(4-chloro-3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-5-[3-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5 4-chloro-N-(4-chloro-3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-5-(3-fluorophenyl)-2-thiophenesulfonamide;
- 4-chloro-N-(4-chloro-3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-5-(3-cyanophenyl)-2-thiophenesulfonamide;
- 4-chloro-N-(4-chloro-3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-5-[3-(methyloxy)phenyl]-2-thiophenesulfonamide;
- 10 2-thiophenesulfonamide;
- 4-chloro-N-(4-chloro-3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-5-(6-methyl-1,3-benzodioxol-5-yl)-2-thiophenesulfonamide;
- 4-chloro-N-(4-chloro-3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-5-(2,4-difluorophenyl)-2-thiophenesulfonamide;
- 15 4-chloro-N-(4-chloro-3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-5-(3,4-dichlorophenyl)-2-thiophenesulfonamide;
- 4-chloro-N-(4-chloro-3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-5-(3-chlorophenyl)-2-thiophenesulfonamide;
- 4-chloro-5-(3-chloro-4-fluorophenyl)-N-(4-chloro-3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-2-thiophenesulfonamide;
- 20 4-bromo-2-chloro-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-5-phenyl-3-thiophenesulfonamide;
- 5-chloro-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-4-phenyl-2-thiophenesulfonamide;
- 25 5-chloro-3-(3-cyanophenyl)-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-chloro-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-3-[3-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-chloro-3-(3-chloro-4-fluorophenyl)-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 30 5-chloro-3-(4-methyl-3-nitrophenyl)-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-chloro-4-(3-chloro-4-fluorophenyl)-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;

- 5-chloro-4-(3,4-dichlorophenyl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 4-[3,4-bis(methyloxy)phenyl]-5-chloro-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5 5-chloro-4-(3,4-difluorophenyl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-chloro-4-(4-methyl-3-nitrophenyl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 4-chloro-5-[3-(methyloxy)phenyl]-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 10 4-chloro-5-[4-(methyloxy)phenyl]-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 4-chloro-5-(4-fluorophenyl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 15 4-chloro-5-(4-cyanophenyl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 4-chloro-5-(2-methylphenyl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 4-chloro-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-5-[3-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 20 4-chloro-5-(3-methylphenyl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-(3-acetylphenyl)-4-chloro-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 25 4-chloro-5-(3-cyanophenyl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 4-chloro-5-(2,4-difluorophenyl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 4-chloro-5-(4-chlorophenyl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 30 5-[3,4-bis(methyloxy)phenyl]-4-chloro-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 4-chloro-5-(3,4-dichlorophenyl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;

5-[3,5-bis(trifluoromethyl)phenyl]-4-chloro-N-[3-[[[(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;

4-chloro-5-(3-fluorophenyl)-N-[3-[[[(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;

5 4-chloro-N-[3-[[[(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-5-{3-[[[(trifluoromethyl)oxy]phenyl]-2-thiophenesulfonamide; and

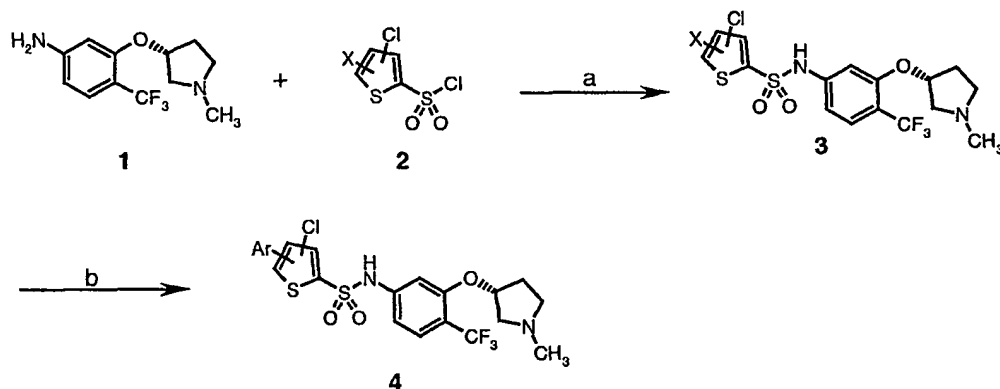
4-chloro-5-[3-fluoro-4-(methyloxy)phenyl]-N-[3-[[[(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide.

10 The compounds of the present invention may contain one or more asymmetric carbon atoms and may exist in racemic and optically active form. All of these compounds and their diastereoisomers are contemplated to be within the scope of the present invention.

Compounds of Formula (I) may be prepared as outlined in Scheme 1.

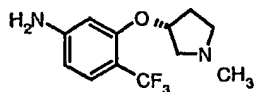
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Scheme 1

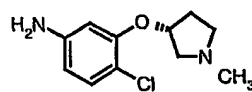


Conditions: a) MeCN, py, rt; b) ArB(OH)₂, Pd⁰, heating. (X is Br or Cl)

20 Anilines A and B have been previously described: WO 2002089792 A1, which is incorporated by reference herein.



Aniline A



Aniline B

25 Sulfonfyl chlorides, when not commercially available, can prepared by methods known in the art: Shahripour, A.B. et al. *Bioorg. Med. Chem.* 2002, 10, 31; Cross, P.E. et al. *J. Med. Chem.*

1978, 21, 845; Huntress et al *J. Amer. Chem. Soc.* 1941, 63, 3446; Hashimoto, H. et al *J. Med. Chem.* 2002, 45, 1511; O'Brien, P. M. et al. *J. Med. Chem.* 2000, 43, 156; Brundish, D. *J. Med. Chem.* 1999, 22, 4584.

5 Substituted benzenesulfonyl chlorides used in the synthesis of the title compounds which were not available commercially and were prepared by methods known to those practiced in the art.

With appropriate manipulation, including the use of alternative nitrogen protecting group(s), the synthesis of the remaining compounds of Formula (I) was accomplished by methods analogous to those above and to those described in the Experimental section.

10 In order to use a compound of the Formula (I) or a pharmaceutically acceptable salt thereof for the treatment of humans and other mammals it is normally formulated in accordance with standard pharmaceutical practice as a pharmaceutical composition.

Compounds of Formula (I) and their pharmaceutically acceptable salts may be administered in a standard manner for the treatment of the indicated diseases, for example
15 orally, parenterally, sub-lingually, transdermally, rectally, via inhalation or via buccal administration.

Compounds of Formula (I) and their pharmaceutically acceptable salts which are active when given orally can be formulated as syrups, tablets, capsules and lozenges. A syrup formulation will generally consist of a suspension or solution of the compound or salt in a
20 liquid carrier for example, ethanol, peanut oil, olive oil, glycerine or water with a flavoring or coloring agent. Where the composition is in the form of a tablet, any pharmaceutical carrier routinely used for preparing solid formulations may be used. Examples of such carriers include magnesium stearate, terra alba, talc, gelatin, agar, pectin, acacia, stearic acid, starch, lactose and sucrose. Where the composition is in the form of a capsule, any routine
25 encapsulation is suitable, for example using the aforementioned carriers in a hard gelatin capsule shell. Where the composition is in the form of a soft gelatin shell capsule any pharmaceutical carrier routinely used for preparing dispersions or suspensions may be considered, for example aqueous gums, celluloses, silicates or oils and are incorporated in a soft gelatin capsule shell.

30 Typical parenteral compositions consist of a solution or suspension of the compound or salt in a sterile aqueous or non-aqueous carrier optionally containing a parenterally acceptable oil, for example polyethylene glycol, polyvinylpyrrolidone, lecithin, arachis oil, or sesame oil.

Typical compositions for inhalation are in the form of a solution, suspension or emulsion that may be administered as a dry powder or in the form of an aerosol using a conventional propellant such as dichlorodifluoromethane or trichlorofluoromethane.

5 A typical suppository formulation comprises a compound of Formula (1) or a pharmaceutically acceptable salt thereof which is active when administered in this way, with a binding and/or lubricating agent, for example polymeric glycols, gelatins, cocoa-butter or other low melting vegetable waxes or fats or their synthetic analogues.

10 Typical transdermal formulations comprise a conventional aqueous or non-aqueous vehicle, for example a cream, ointment, lotion or paste or are in the form of a medicated plaster, patch or membrane.

Preferably the composition is in unit dosage form, for example a tablet, capsule or metered aerosol dose, so that the patient may administer to themselves a single dose.

Each dosage unit for oral administration contains suitably from 0.1 mg to 500 mg/Kg, and preferably from 1 mg to 100 mg/Kg, and each dosage unit for parenteral administration
15 contains suitably from 0.1 mg to 100 mg, of a compound of Formula (I) or a pharmaceutically acceptable salt thereof calculated as the free acid. Each dosage unit for intranasal administration contains suitably 1-400 mg and preferably 10 to 200 mg per person. A topical formulation contains suitably 0.01 to 1.0% of a compound of Formula (I).

The daily dosage regimen for oral administration is suitably about 0.01 mg/Kg to 40
20 mg/Kg, of a compound of Formula (I) or a pharmaceutically acceptable salt thereof calculated as the free acid. The daily dosage regimen for parenteral administration is suitably about 0.001 mg/Kg to 40 mg/Kg, of a compound of the Formula (I) or a pharmaceutically acceptable salt thereof calculated as the free acid. The daily dosage regimen for intranasal administration and oral inhalation is suitably about 10 to about 500 mg/person. The active ingredient may be
25 administered from 1 to 6 times a day, sufficient to exhibit the desired activity.

These sulphonamide analogs may be used for the treatment of congestive heart failure, stroke, ischemic heart disease (angina, myocardial ischemia), cardiac arrhythmia, hypertension (essential and pulmonary), renal disease (acute and chronic renal failure/end stage renal disease) along with peripheral vascular disease (male erectile dysfunction, diabetic retinopathy,
30 intermittent claudication/ischemic limb disease) and ischemic/hemorrhagic stroke, COPD, restenosis, asthma, neurogenic inflammation, migraine, metabolic vasculopathies, bone/cartilage/joint diseases, arthritis and other inflammatory diseases, fibrosis (e.g. pulmonary fibrosis), sepsis, atherosclerosis, dyslipidemia, addiction, schizophrenia, cognitive disorders/Alzheimers disease, impulsivity, anxiety, stress, depression, pain, neuromuscular
35 function, diabetes, gastric reflux, gastric motility disorders, ulcers and genitourinary diseases.

The urotensin antagonist may be administered alone or in conjunction with one or more other therapeutic agents, said agents being selected from the group consisting of endothelin receptor antagonists, angiotensin converting enzyme (ACE) inhibitors, A-II receptor antagonists, vasopeptidase inhibitors, diuretics, digoxin, and dual non-selective α -adrenoceptor and α_1 -adrenoceptor antagonists.

No unacceptable toxicological effects are expected when compounds of the invention are administered in accordance with the present invention.

The biological activity of the compounds of Formula (I) are demonstrated by the following tests:

10 Radioligand binding:

HEK-293 cell membranes containing stable cloned human and rat GPR-14 (20 ug/assay) were incubated with 200 pM [125 I] h-U-II (200 Ci/mmol⁻¹ in the presence of increasing concentrations of test compounds in DMSO (0.1 nM to 10 uM), in a final incubation volume of 200 ul (20 mM Tris-HCl, 5 mM MgCl₂). Incubation was done for 30 minutes at room temperature followed by filtration GF/B filters with Brandel cell harvester. 125 I labeled U-II binding was quantitated by gamma counting. Nonspecific binding was defined by 125 I U-II binding in the presence of 100 nM of unlabeled human U-II. Analysis of the data was performed by nonlinear least square fitting.

Ca²⁺-mobilization:

A microtitre plate based Ca²⁺-mobilization FLIPR assay (Molecular Devices, Sunnyvale, CA) was used for the functional identification of the ligand activating HEK-293 cells expressing (stable) recombinant GPR-14. The day following transfection, cells were plated in a poly-D-lysine coated 96 well black/clear plates. After 18-24 hours the media was aspirated and Fluo 3AM-loaded cells were exposed to various concentrations (10 nM to 30 uM) of test compounds followed by h-U-II. After initiation of the assay, fluorescence was read every second for one minute and then every 3 seconds for the following one minute. The inhibitory concentration at 50% (IC₅₀) was calculated for various test compounds.

Inositol phosphates assays:

HEK-293-GPR14 cells in T150 flask were prelabeled overnight with 1 uCi myo-[3 H] inositol per ml of inositol free Dulbecco's modified Eagle's medium. After labeling, the cells were washed twice with Dulbecco's phosphate-buffered saline (DPBS) and then incubated in DPBS containing 10 mM LiCl for 10 min at 37°C. The experiment was initiated by the addition of increasing concentrations of h-U-II (1 pM to 1 uM) in the absence and presence of three different concentrations (0.3, 1 and 10 uM) of test compounds and the incubation

continued for an additional 5 min at 37°C after which the reaction was terminated by the addition of 10% (final concentration) trichloroacetic acid and centrifugation. The supernatants were neutralized with 100ul of 1M Trizma base and the inositol phosphates were separated on AG 1-X8 columns (0.8 ml packed, 100-200 mesh) in formate phase. Inositol monophosphate was eluted with 8 ml of 200 mM ammonium formate. Combined inositol di and tris phosphate was eluted with 4ml of 1M ammonium formate/ 0.1 M formic acid. Eluted fractions were counted in beta scintillation counter. Based on shift from the control curve K_B was calculated.

Activity for the compounds of this invention range from (radioligand binding assay):
 $K_i = 1 \text{ nM} - 10000 \text{ nM}$.

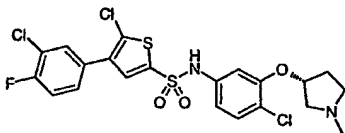
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The following Examples are illustrative but not limiting embodiments of the present invention.

Example 1

5-chloro-4-(3-chloro-4-fluorophenyl)-N-(4-chloro-3-[(3R)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-2-thiophenesulfonamide:

15



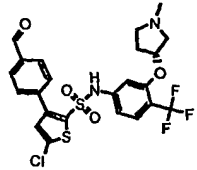
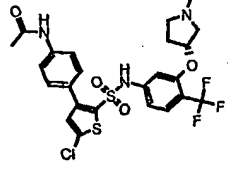
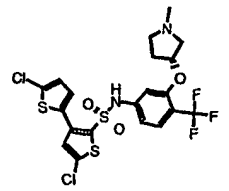
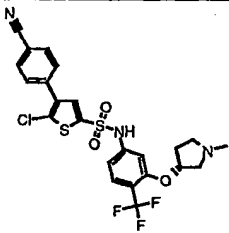
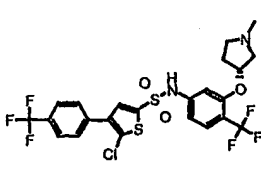
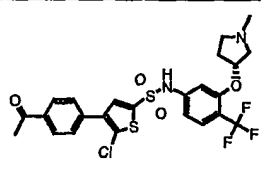
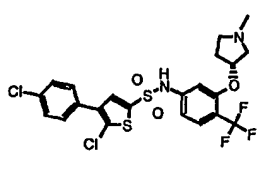
4-bromo-5-chloro-N-(4-chloro-3-[(3R)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-2-thiophenesulfonamide (synthesized as outlined in WO 2002090348) (100 mg, 0.21 mmol) was dissolved in 4 mL of dioxane and treated with [1,1'-Bis(diphenylphosphino)ferrocene] dichloropalladium(II) complex with dichloromethane (1:1) {Pd DPPF} (25 mg, 0.031 mmol), potassium carbonate (0.31 mL of a 2.0 M aqueous solution, 0.62 mmol), and (3-dichloro-4-fluorophenyl)boronic acid (37 mg, 0.21 mmol). This suspension was stirred vigorously and heated to 185 °C for 600 sec in a Personal Chemistry Microwave Reactor at the Normal power level. The reaction mixture was filtered through a 0.2 micron Acrodisk filter, concentrated, dissolved in DMSO and purified by preparative HPLC (X-Terra Prep RP ODS-A, 30 × 75 mm, 25 mL/min, A: acetonitrile B: water, A: 5% to 65% during 15 min, UV detection at 214 nm) to give 50 mg (44%) of the title compound as a brown solid. MS (ES) m/e 535 [M+H]⁺

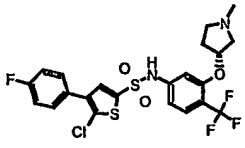
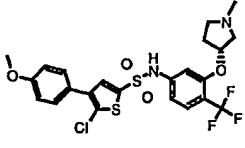
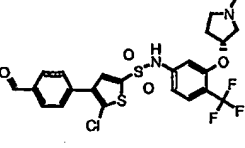
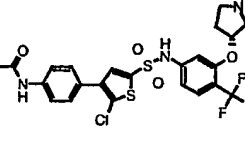
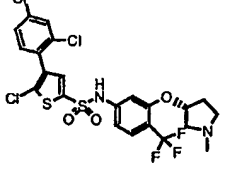
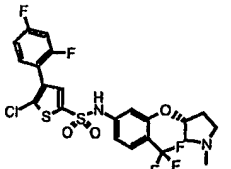
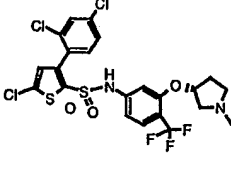
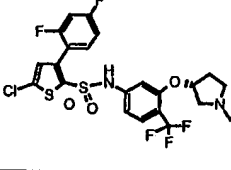
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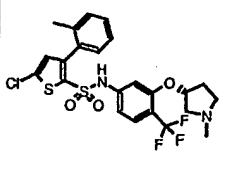
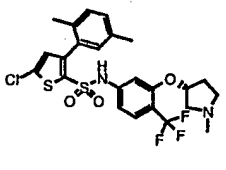
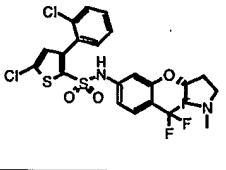
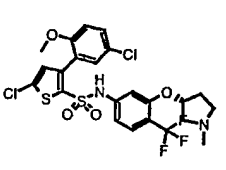
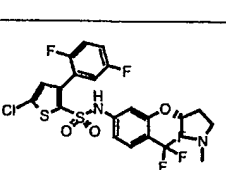
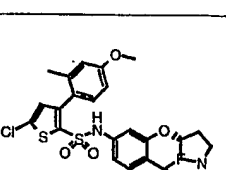
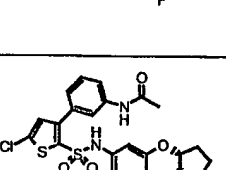
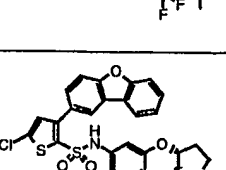
Examples 2-152

The following compounds were prepared according to the procedure described in example 1 using the appropriate acid in place of 3,5-dichlorophenylboronic acid.

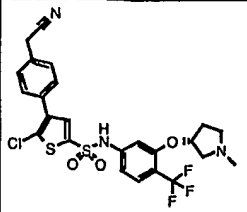
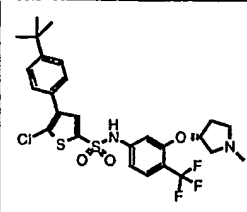
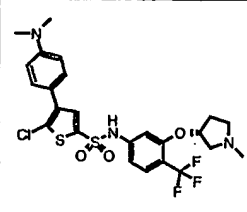
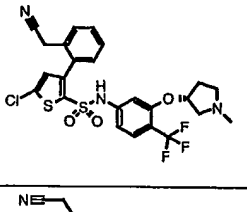
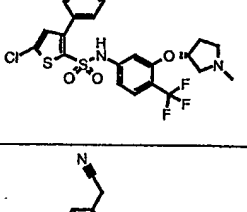
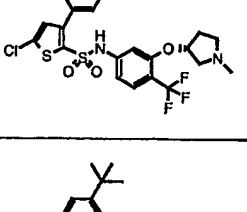
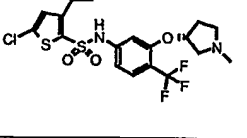
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3		5-chloro-N-[3-[[[(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-3-[4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	585.0
4		3-(4-acetylphenyl)-5-chloro-N-[3-[[[(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	559.0
5		5-chloro-3-(4-chlorophenyl)-N-[3-[[[(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	550.8
6		5-chloro-3-(4-fluorophenyl)-N-[3-[[[(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	534.8
7		5-chloro-3-[4-(methyloxy)phenyl]-N-[3-[[[(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	547.0

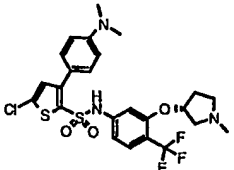
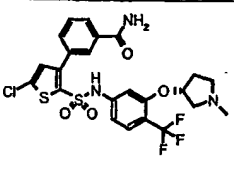
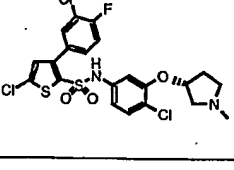
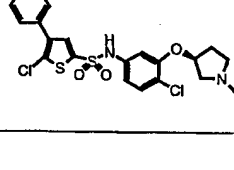
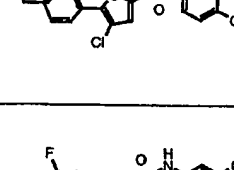
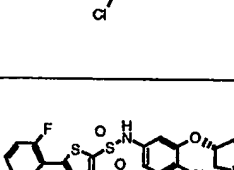
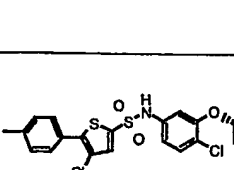
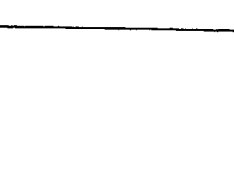
8		5-chloro-3-(4-formylphenyl)-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	545.0
9		N-{4-[5-chloro-2-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]amino)sulfonyl}-3-thienyl]phenyl}acetamide	573.8
10		5,5'-dichloro-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-2,3'-bithiophene-2'-sulfonamide	557.0
11		5-chloro-4-(4-cyanophenyl)-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	542.0
12		5-chloro-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-4-[4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	585.0
13		4-(4-acetylphenyl)-5-chloro-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	559.0
14		5-chloro-4-(4-chlorophenyl)-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	550.8

15		5-chloro-4-(4-fluorophenyl)-N-[3- {[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4- (trifluoromethyl)phenyl]-2- thiophenesulfonamide	534.6
16		5-chloro-4-[4-(methoxy)phenyl]-N-[3- {[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4- (trifluoromethyl)phenyl]-2- thiophenesulfonamide	546.8
17		5-chloro-4-(4-formylphenyl)-N-[3- {[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4- (trifluoromethyl)phenyl]-2- thiophenesulfonamide	545.2
18		N-{4-[2-chloro-5-({[3- {[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4- (trifluoromethyl)phenyl]amino)sulfonyl }-3-thienyl]phenyl}acetamide	574.2
19		5-chloro-2-(2,4-dichlorophenyl)-N-[3- {[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4- (trifluoromethyl)phenyl]-2- thiophenesulfonamide	587
20		5-chloro-2-(2,4-difluorophenyl)-N-[3- {[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4- (trifluoromethyl)phenyl]-2- thiophenesulfonamide	553
21		5-chloro-3-(2,4-dichlorophenyl)-N-[3- {[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4- (trifluoromethyl)phenyl]-2- thiophenesulfonamide	585
22		5-chloro-3-(2,4-difluorophenyl)-N-[3- {[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4- (trifluoromethyl)phenyl]-2- thiophenesulfonamide	553

23		5-chloro-3-(2-methylphenyl)-N-[3- {[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4- (trifluoromethyl)phenyl]-2- thiophenesulfonamide	531
24		5-chloro-3-(2,5-dimethylphenyl)-N-[3- {[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4- (trifluoromethyl)phenyl]-2- thiophenesulfonamide	545
25		5-chloro-3-(2-chlorophenyl)-N-[3- {[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4- (trifluoromethyl)phenyl]-2- thiophenesulfonamide	551
26		5-chloro-3-[5-chloro-2- (methyloxy)phenyl]-N-[3-{[(3R)-1- methyl-3-pyrrolidinyl]oxy}-4- (trifluoromethyl)phenyl]-2- thiophenesulfonamide	581
27		5-chloro-3-(2,5-difluorophenyl)-N-[3- {[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4- (trifluoromethyl)phenyl]-2- thiophenesulfonamide	553
28		5-chloro-3-[2-methyl-4- (methyloxy)phenyl]-N-[3-{[(3R)-1- methyl-3-pyrrolidinyl]oxy}-4- (trifluoromethyl)phenyl]-2- thiophenesulfonamide	561
29		N-[3-[5-chloro-2-({3-{[(3R)-1-methyl- 3-pyrrolidinyl]oxy}-4- (trifluoromethyl)phenyl}amino)sulfonyl)-3-thienyl]phenyl]acetamide	573
30		5-chloro-3-dibenzo[b,d]furan-2-yl-N-[3- {[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4- (trifluoromethyl)phenyl]-2- thiophenesulfonamide	607

31		5-chloro-3-[2-methyl-8-(methoxy)-5-quinolinyl]-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	612
32		5-chloro-3-(6-methyl-1,3-benzodioxol-5-yl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	575
33		5-chloro-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-3-[4-(methylthio)phenyl]-2-thiophenesulfonamide	563
34		5-chloro-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-3-[4-[(trifluoromethyl)oxy]phenyl]-2-thiophenesulfonamide	601
35		5-chloro-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-3-[2-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	585
36		5-chloro-4-[2-(cyanomethyl)phenyl]-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	556
37		5-chloro-4-[3-(cyanomethyl)phenyl]-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	556

38		5-chloro-4-[4-(cyanomethyl)phenyl]-N-[3-[[3-(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	556
39		5-chloro-4-[4-(1,1-dimethylethyl)phenyl]-N-[3-[[3-(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	573
40		5-chloro-4-[4-(dimethylamino)phenyl]-N-[3-[[3-(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	560
41		5-chloro-3-[2-(cyanomethyl)phenyl]-N-[3-[[3-(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	556
42		5-chloro-3-[3-(cyanomethyl)phenyl]-N-[3-[[3-(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	556
43		5-chloro-3-[4-(cyanomethyl)phenyl]-N-[3-[[3-(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	556
44		5-chloro-3-[4-(1,1-dimethylethyl)phenyl]-N-[3-[[3-(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	573

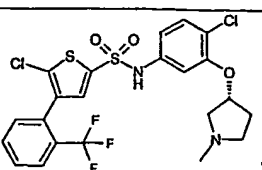
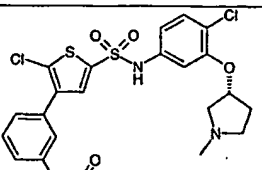
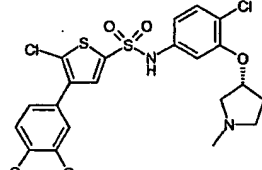
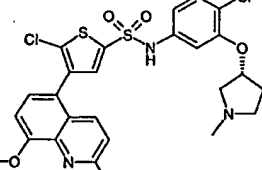
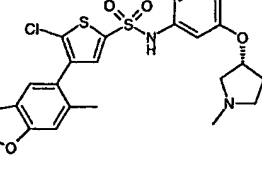
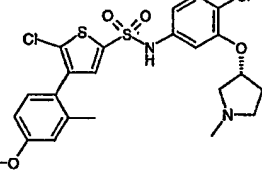
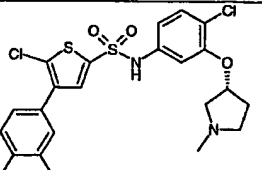
45		5-chloro-3-[4-(dimethylamino)phenyl]-N-[3-{{{(3R)-1-methyl-3-pyrrolidinyl}oxy}}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	560
46		3-[5-chloro-2-({[3-{{{(3R)-1-methyl-3-pyrrolidinyl}oxy}}-4-(trifluoromethyl)phenyl]amino} sulfonyl)-3-thienyl]benzamide	560
47		5-chloro-3-(3-chloro-4-fluorophenyl)-N-(4-chloro-3-{{{(3R)-1-methyl-3-pyrrolidinyl}oxy}}phenyl)-2-thiophenesulfonamide	535.0
48		5-chloro-4-(3-chloro-4-fluorophenyl)-N-(4-chloro-3-{{{(3S)-1-methyl-3-pyrrolidinyl}oxy}}phenyl)-2-thiophenesulfonamide	535.0
49		4-chloro-N-(4-chloro-3-{{{(3R)-1-methyl-3-pyrrolidinyl}oxy}}phenyl)-5-[4-(cyanomethyl)phenyl]-2-thiophenesulfonamide	522.4
50		4-chloro-N-(4-chloro-3-{{{(3R)-1-methyl-3-pyrrolidinyl}oxy}}phenyl)-5-[3-fluoro-4-(methoxy)phenyl]-2-thiophenesulfonamide	531.2
51		4-chloro-N-(4-chloro-3-{{{(3R)-1-methyl-3-pyrrolidinyl}oxy}}phenyl)-5-(2-fluorophenyl)-2-thiophenesulfonamide	501.4
52		4-chloro-N-(4-chloro-3-{{{(3R)-1-methyl-3-pyrrolidinyl}oxy}}phenyl)-5-(4-methylphenyl)-2-thiophenesulfonamide	497.2

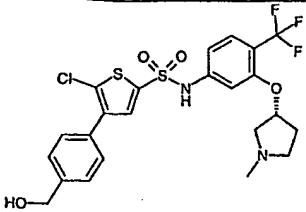
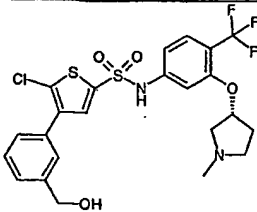
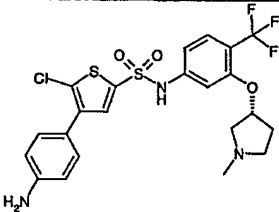
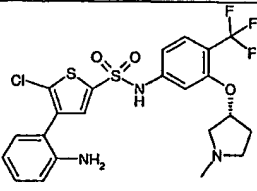
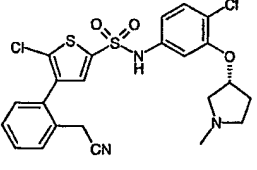
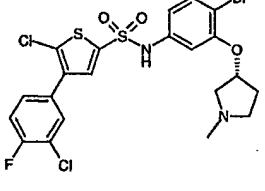
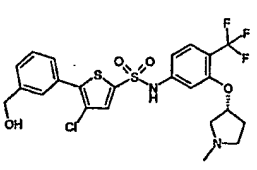
53		5-chloro-N-(4-chloro-3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-4-(3,4-difluorophenyl)-2-thiophenesulfonamide	519
54		5-chloro-N-(4-chloro-3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-4-(4-cyanophenyl)-2-thiophenesulfonamide	508
55		5-chloro-N-(4-chloro-3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-4-phenyl-2-thiophenesulfonamide	483
56		5-chloro-N-(4-chloro-3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-4-(4-chlorophenyl)-2-thiophenesulfonamide	517
57		4-(2-aminophenyl)-5-chloro-N-(4-chloro-3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-2-thiophenesulfonamide	498
58		4-(3-aminophenyl)-5-chloro-N-(4-chloro-3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-2-thiophenesulfonamide	498
59		5-chloro-N-(4-chloro-3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-4-(4-fluorophenyl)-2-thiophenesulfonamide	501
60		5-chloro-N-(4-chloro-3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-4-[4-(methoxy)phenyl]-2-thiophenesulfonamide	513
61		4-(4-biphenyl)-5-chloro-N-(4-chloro-3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-2-thiophenesulfonamide	559

		thiophenesulfonamide	
62		5-chloro-N-(4-chloro-3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}phenyl)-4-[4-(phenyloxy)phenyl]-2-thiophenesulfonamide	577
63		5-chloro-N-(4-chloro-3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}phenyl)-4-[3-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	551
64		5-chloro-N-(4-chloro-3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}phenyl)-4-[4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	551
65		5-chloro-N-(4-chloro-3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}phenyl)-4-(3-chlorophenyl)-2-thiophenesulfonamide	517
66		5-chloro-N-(4-chloro-3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}phenyl)-4-[3-(methyloxy)phenyl]-2-thiophenesulfonamide	513
67		5-Chloro-4-(2-methylphenyl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	531.0
68		5-chloro-4-(2,5-difluorophenyl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	552.8

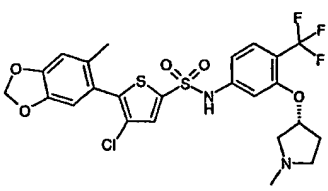
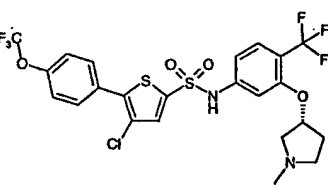
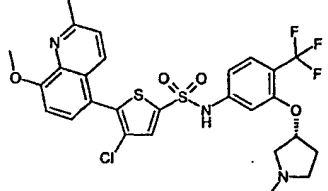
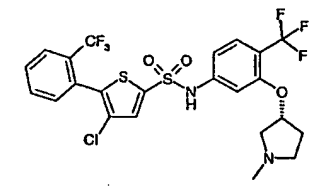
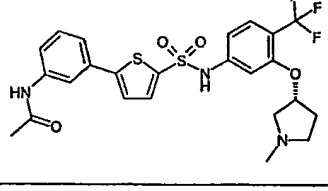
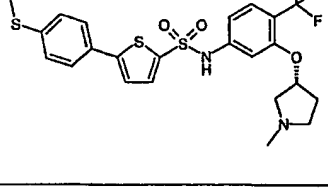
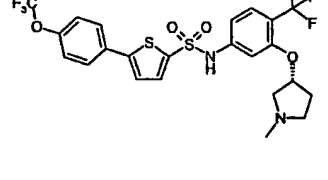
69		5-chloro-4-(2,5-dimethylphenyl)- <i>N</i> -[3- {{[(3 <i>R</i>)-1-methyl-3-pyrrolidinyl]oxy}-4- (trifluoromethyl)phenyl]-2- thiophenesulfonamide	545.2
70		5-chloro-4-[2-(methoxy)phenyl]- <i>N</i> -[3- {{[(3 <i>R</i>)-1-methyl-3-pyrrolidinyl]oxy}-4- (trifluoromethyl)phenyl]-2- thiophenesulfonamide	547.0
71		5-chloro-4-(2-chlorophenyl)- <i>N</i> -[3- {{[(3 <i>R</i>)-1-methyl-3-pyrrolidinyl]oxy}-4- (trifluoromethyl)phenyl]-2- thiophenesulfonamide	550.8
72		5-chloro-4-[5-chloro-2- (methoxy)phenyl]- <i>N</i> -[3-{{[(3 <i>R</i>)-1- methyl-3-pyrrolidinyl]oxy}-4- (trifluoromethyl)phenyl]-2- thiophenesulfonamide	581.0
73		<i>N</i> -{3-[2-chloro-5-({[3-{{[(3 <i>R</i>)-1-methyl- 3-pyrrolidinyl]oxy}-4- (trifluoromethyl)phenyl]amino)sulfonyl)-3-thienyl]phenyl}acetamide	573.8
74		5-chloro- <i>N</i> -[3-{{[(3 <i>R</i>)-1-methyl-3- pyrrolidinyl]oxy}-4- (trifluoromethyl)phenyl]-4-[4- (methylthio)phenyl]-2- thiophenesulfonamide	562.8
75		5-chloro-4-[2-methyl-8-(methoxy)-5- quinoliny]- <i>N</i> -[3-{{[(3 <i>R</i>)-1-methyl-3- pyrrolidinyl]oxy}-4- (trifluoromethyl)phenyl]-2- thiophenesulfonamide	612.2

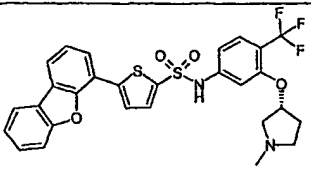
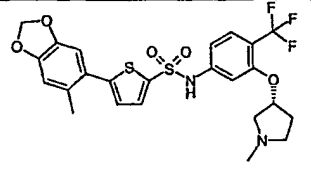
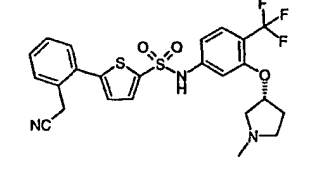
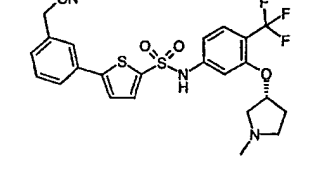
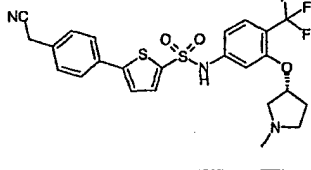
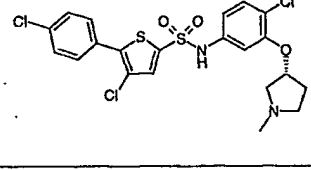
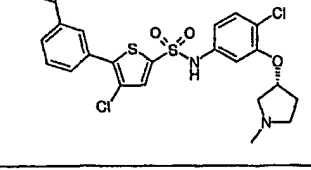
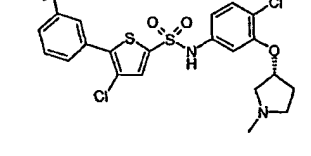
76		5-chloro- <i>N</i> -[3-([(3 <i>R</i>)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-4-[2-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	585.0
77		5-chloro-4-dibenzo[<i>b,d</i>]furan-4-yl- <i>N</i> -[3-([(3 <i>R</i>)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	607.0
78		5-chloro-4-(6-methyl-1,3-benzodioxol-5-yl)- <i>N</i> -[3-([(3 <i>R</i>)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	575.0
79		5-chloro- <i>N</i> -[3-([(3 <i>R</i>)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-4-{4-[(trifluoromethyl)oxy]phenyl}-2-thiophenesulfonamide	601.0
80		5-chloro-4-[2-methyl-4-(methyloxy)phenyl]- <i>N</i> -[3-([(3 <i>R</i>)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	560.8
81		5-chloro- <i>N</i> -(4-chloro-3-([(3 <i>R</i>)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-4-(3,4-dichlorophenyl)-2-thiophenesulfonamide	551.2
82		5-chloro- <i>N</i> -(4-chloro-3-([(3 <i>R</i>)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-4-(3,5-dichlorophenyl)-2-thiophenesulfonamide	551

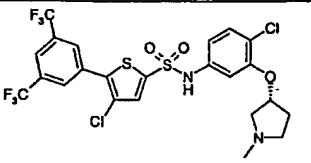
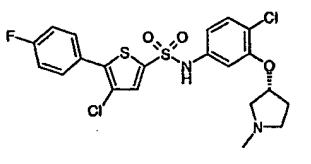
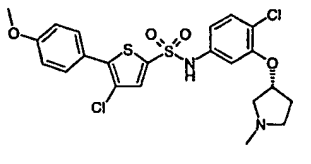
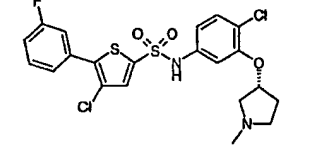
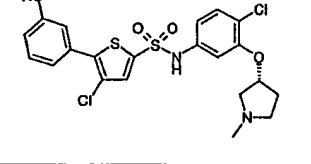
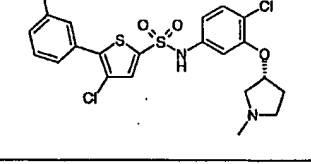
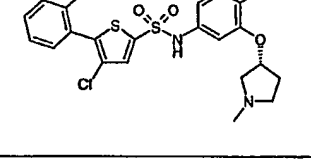
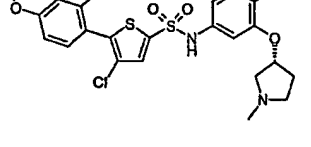
83		5-chloro- <i>N</i> -(4-chloro-3-(((3 <i>R</i>)-1-methyl-3-pyrrolidinyl)oxy)phenyl)-4-[2-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	551.2
84		<i>N</i> -[3-(2-chloro-5-(((4-chloro-3-(((3 <i>R</i>)-1-methyl-3-pyrrolidinyl)oxy)phenyl)amino)sulfonyl)-3-thienyl)phenyl]acetamide	540.2
85		4-[3,4-bis(methoxy)phenyl]-5-chloro- <i>N</i> -(4-chloro-3-(((3 <i>R</i>)-1-methyl-3-pyrrolidinyl)oxy)phenyl)-2-thiophenesulfonamide	543.4
86		5-chloro- <i>N</i> -(4-chloro-3-(((3 <i>R</i>)-1-methyl-3-pyrrolidinyl)oxy)phenyl)-4-[2-methyl-8-(methoxy)-5-quinoliny]-2-thiophenesulfonamide	578.0
87		5-chloro- <i>N</i> -(4-chloro-3-(((3 <i>R</i>)-1-methyl-3-pyrrolidinyl)oxy)phenyl)-4-(6-methyl-1,3-benzodioxol-5-yl)-2-thiophenesulfonamide	541.1
88		5-chloro- <i>N</i> -(4-chloro-3-(((3 <i>R</i>)-1-methyl-3-pyrrolidinyl)oxy)phenyl)-4-[2-methyl-4-(methoxy)phenyl]-2-thiophenesulfonamide	527.4
89		5-chloro- <i>N</i> -(4-chloro-3-(((3 <i>R</i>)-1-methyl-3-pyrrolidinyl)oxy)phenyl)-4-(4-methyl-3-nitrophenyl)-2-thiophenesulfonamide	542.4

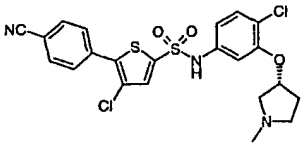
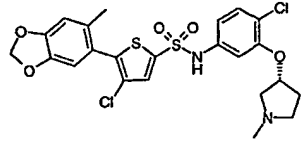
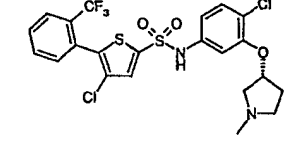
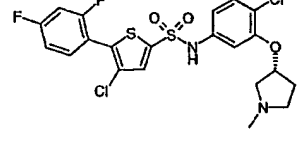
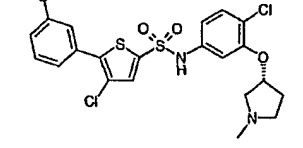
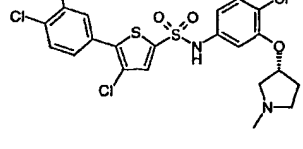
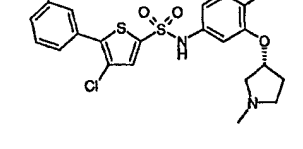
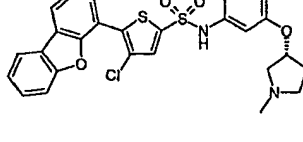
90		5-chloro-4-[4-(hydroxymethyl)phenyl]- <i>N</i> -[3-[[[(3 <i>R</i>)-1-methyl-3- pyrrolidinyl]oxy]-4- (trifluoromethyl)phenyl]-2- thiophenesulfonamide	547.2
91		5-chloro-4-[3-(hydroxymethyl)phenyl]- <i>N</i> -[3-[[[(3 <i>R</i>)-1-methyl-3- pyrrolidinyl]oxy]-4- (trifluoromethyl)phenyl]-2- thiophenesulfonamide	547.0
92		4-(4-aminophenyl)-5-chloro- <i>N</i> -[3- [[[(3 <i>R</i>)-1-methyl-3-pyrrolidinyl]oxy]-4- (trifluoromethyl)phenyl]-2- thiophenesulfonamide	532.0
93		4-(2-aminophenyl)-5-chloro- <i>N</i> -[3- [[[(3 <i>R</i>)-1-methyl-3-pyrrolidinyl]oxy]-4- (trifluoromethyl)phenyl]-2- thiophenesulfonamide	532.2
94		5-chloro- <i>N</i> -(4-chloro-3-[[[(3 <i>R</i>)-1- methyl-3-pyrrolidinyl]oxy]phenyl)-4- [2-(cyanomethyl)phenyl]-2- thiophenesulfonamide	522.2
95		<i>N</i> -(4-bromo-3-[[[(3 <i>R</i>)-1- methylpyrrolidin-3-yl]oxy]phenyl)-5- chloro-4-(3-chloro-4- fluorophenyl)thiophene-2-sulfonamide	579.0
96		4-chloro-5-[3-(hydroxymethyl)phenyl]- <i>N</i> -[3-[[[(3 <i>R</i>)-1-methyl-3- pyrrolidinyl]oxy]-4- (trifluoromethyl)phenyl]-2- thiophenesulfonamide	547.0

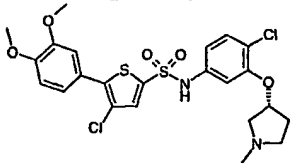
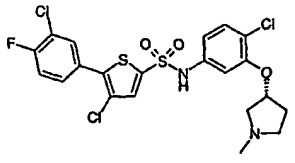
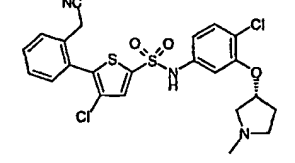
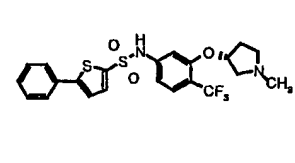
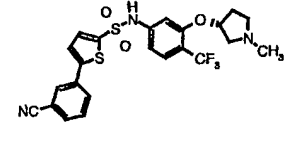
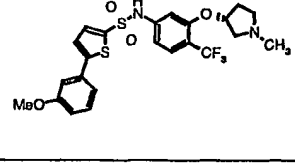
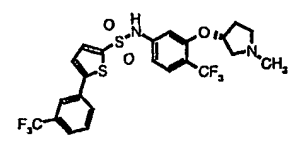
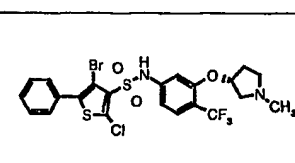
97		4-chloro-5-[3-(cyanomethyl)phenyl]- <i>N</i> -[3-[[3-(1-methyl-3-pyrrolidinyl)oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	556.2
98		4-chloro-5-[2-(cyanomethyl)phenyl]- <i>N</i> -[3-[[3-(1-methyl-3-pyrrolidinyl)oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	556.2
99		4-chloro-5-[4-(cyanomethyl)phenyl]- <i>N</i> -[3-[[3-(1-methyl-3-pyrrolidinyl)oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	556.0
100		5-(3-aminophenyl)-4-chloro- <i>N</i> -[3-[[3-(1-methyl-3-pyrrolidinyl)oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	532.0
101		4-chloro-5-dibenzo[<i>b,d</i>]furan-4-yl- <i>N</i> -[3-[[3-(1-methyl-3-pyrrolidinyl)oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	607.0
102		4-chloro- <i>N</i> -[3-[[3-(1-methyl-3-pyrrolidinyl)oxy]-4-(trifluoromethyl)phenyl]-5-[4-(methylthio)phenyl]-2-thiophenesulfonamide	563.0
103		4-chloro-5-[2-methyl-4-(methoxy)phenyl]- <i>N</i> -[3-[[3-(1-methyl-3-pyrrolidinyl)oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	561.0

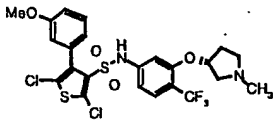
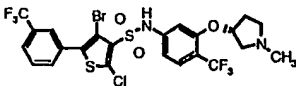
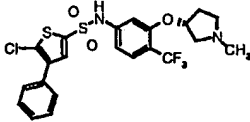
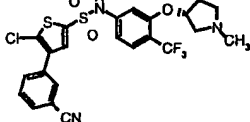
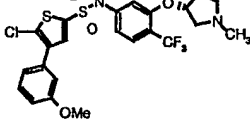
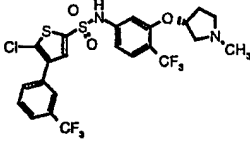
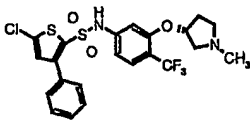
104		4-chloro-5-(5-methyl-1,3-benzodioxol-4-yl)-N-[3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	575.0
105		4-chloro-N-[3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl]-5-{4-[(trifluoromethyl)oxy]phenyl}-2-thiophenesulfonamide	601.0
106		4-chloro-5-[2-methyl-8-(methyloxy)-5-quinolinyl]-N-[3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	612.0
107		4-chloro-N-[3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl]-5-[2-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	584.6
108		N-[3-5-({3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl}amino)sulfonyl)-2-thienyl]phenyl}acetamide	540.0
109		N-[3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl]-5-[4-(methylthio)phenyl]-2-thiophenesulfonamide	529.0
110		N-[3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl]-5-{4-[(trifluoromethyl)oxy]phenyl}-2-thiophenesulfonamide	567.2

111		5-dibenzo[b,d]furan-4-yl-N-[3-[[3-(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	572.8
112		5-(6-methyl-1,3-benzodioxol-5-yl)-N-[3-[[3-(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	541.0
113		5-[2-(cyanomethyl)phenyl]-N-[3-[[3-(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	522.2
114		5-[3-(cyanomethyl)phenyl]-N-[3-[[3-(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	522.2
115		5-[4-(cyanomethyl)phenyl]-N-[3-[[3-(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	522.2
116		4-chloro-N-(4-chloro-3-[[3-(3R)-1-methyl-3-pyrrolidinyl]oxy]phenyl)-5-(4-chlorophenyl)-2-thiophenesulfonamide	517.2
117		5-(3-acetylphenyl)-4-chloro-N-(4-chloro-3-[[3-(3R)-1-methyl-3-pyrrolidinyl]oxy]phenyl)-2-thiophenesulfonamide	525.2
118		4-chloro-N-(4-chloro-3-[[3-(3R)-1-methyl-3-pyrrolidinyl]oxy]phenyl)-5-[3-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	551.0

119		5-[3,5-bis(trifluoromethyl)phenyl]-4-chloro- <i>N</i> -(4-chloro-3-([(3 <i>R</i>)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-2-thiophenesulfonamide	621.2
120		4-chloro- <i>N</i> -(4-chloro-3-([(3 <i>R</i>)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-5-(4-fluorophenyl)-2-thiophenesulfonamide	501.2
121		4-chloro- <i>N</i> -(4-chloro-3-([(3 <i>R</i>)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-5-[4-(methoxy)phenyl]-2-thiophenesulfonamide	513.2
122		4-chloro- <i>N</i> -(4-chloro-3-([(3 <i>R</i>)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-5-(3-fluorophenyl)-2-thiophenesulfonamide	501.2
123		4-chloro- <i>N</i> -(4-chloro-3-([(3 <i>R</i>)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-5-(3-cyanophenyl)-2-thiophenesulfonamide	508.0
124		4-chloro- <i>N</i> -(4-chloro-3-([(3 <i>R</i>)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-5-[3-(methoxy)phenyl]-2-thiophenesulfonamide	513.2
125		4-chloro- <i>N</i> -(4-chloro-3-([(3 <i>R</i>)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-5-(2-methylphenyl)-2-thiophenesulfonamide	497.2
126		4-chloro- <i>N</i> -(4-chloro-3-([(3 <i>R</i>)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-5-[2-methyl-4-(methoxy)phenyl]-2-thiophenesulfonamide	527.4

127		4-chloro- <i>N</i> -(4-chloro-3-{{{3 <i>R</i> }-1-methyl-3-pyrrolidinyl}oxy}phenyl)-5-(4-cyanophenyl)-2-thiophenesulfonamide	508.0
128		4-chloro- <i>N</i> -(4-chloro-3-{{{3 <i>R</i> }-1-methyl-3-pyrrolidinyl}oxy}phenyl)-5-(6-methyl-1,3-benzodioxol-5-yl)-2-thiophenesulfonamide	541.0
129		4-chloro- <i>N</i> -(4-chloro-3-{{{3 <i>R</i> }-1-methyl-3-pyrrolidinyl}oxy}phenyl)-5-[2-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	551.2
130		4-chloro- <i>N</i> -(4-chloro-3-{{{3 <i>R</i> }-1-methyl-3-pyrrolidinyl}oxy}phenyl)-5-(2,4-difluorophenyl)-2-thiophenesulfonamide	519.2
131		4-chloro- <i>N</i> -(4-chloro-3-{{{3 <i>R</i> }-1-methyl-3-pyrrolidinyl}oxy}phenyl)-5-[3-((trifluoromethyl)oxy)phenyl]-2-thiophenesulfonamide	566.8
132		4-chloro- <i>N</i> -(4-chloro-3-{{{3 <i>R</i> }-1-methyl-3-pyrrolidinyl}oxy}phenyl)-5-(3,4-dichlorophenyl)-2-thiophenesulfonamide	551.0
133		4-chloro- <i>N</i> -(4-chloro-3-{{{3 <i>R</i> }-1-methyl-3-pyrrolidinyl}oxy}phenyl)-5-(3-chlorophenyl)-2-thiophenesulfonamide	517.2
134		4-chloro- <i>N</i> -(4-chloro-3-{{{3 <i>R</i> }-1-methyl-3-pyrrolidinyl}oxy}phenyl)-5-dibenzo[b,d]furan-4-yl-2-thiophenesulfonamide	573.0

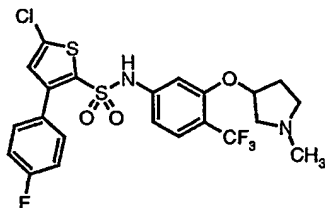
135		5-[3,4-bis(methoxy)phenyl]-4-chloro- <i>N</i> -(4-chloro-3-{[(3 <i>R</i>)-1-methyl-3-pyrrolidinyl]oxy}phenyl)-2-thiophenesulfonamide	543.0
136		4-chloro-5-(3-chloro-4-fluorophenyl)- <i>N</i> -(4-chloro-3-{[(3 <i>R</i>)-1-methyl-3-pyrrolidinyl]oxy}phenyl)-2-thiophenesulfonamide	535.0
137		4-chloro- <i>N</i> -(4-chloro-3-{[(3 <i>R</i>)-1-methyl-3-pyrrolidinyl]oxy}phenyl)-5-[2-(cyanomethyl)phenyl]-2-thiophenesulfonamide	522.2
138		<i>N</i> -[3-{[(3 <i>R</i>)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl]-5-phenyl-2-thiophenesulfonamide	483.2
139		5-(3-cyanophenyl)- <i>N</i> -[3-{[(3 <i>R</i>)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	508.0
140		5-[3-(methoxy)phenyl]- <i>N</i> -[3-{[(3 <i>R</i>)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	513.2
141		<i>N</i> -[3-{[(3 <i>R</i>)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl]-5-[3-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	551.0
142		4-bromo-2-chloro- <i>N</i> -[3-{[(3 <i>R</i>)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl]-5-phenyl-3-thiophenesulfonamide	595.0

143		2,5-dichloro-4-[3-(methyloxy)phenyl]-N-[3-[[3-(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-3-thiophenesulfonamide	580.8
144		4-bromo-2-chloro-N-[3-[[3-(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-5-[3-(trifluoromethyl)phenyl]-3-thiophenesulfonamide	663.2
145		5-chloro-N-[3-[[3-(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-4-phenyl-2-thiophenesulfonamide	516.8
146		5-chloro-4-(3-cyanophenyl)-N-[3-[[3-(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	542.2
147		5-chloro-4-[3-(methyloxy)phenyl]-N-[3-[[3-(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	547.0
148		5-chloro-N-[3-[[3-(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-4-[3-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	585.0
149		5-chloro-N-[3-[[3-(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-3-phenyl-2-thiophenesulfonamide	517.2

150		5-chloro-3-(3-cyanophenyl)-N-[[3-[[[(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	542.2
151		5-chloro-3-[3-(methyloxy)phenyl]-N-[[3-[[[(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	546.8
152		5-chloro-N-[[3-[[[(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-3-[3-(trifluoromethyl)phenyl]-2-thiophenesulfonyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	585.0

Example 153

5-chloro-3-(4-fluorophenyl)-N-[[3-[[[(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide:



5

The 3-bromo-5-chloro-N-[[3-[[[(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide (25 mg, 0.05 mmol) and 4-fluorobenzeneboronic acid (7 mg, 0.05 mmol) were dissolved in a mixture of toluene and ethanol (4:1, 2.5 ml). (dppf)₂PdCl₂ (5.0 mg, 0.007 mmol, 14%) was added followed by 2M Na₂CO₃ solution (0.13 ml, 0.26 mmol). The mixture was heated at 90°C for 18 h then concentrated in vacuo. The crude mixture was purified by preparative HPLC (YMC CombiPrep ODS-A, 50 × 20 mm, 20 mL/min, A: acetonitrile B: water, A: 10 to 90% over 10 min, UV detection at 214 nm) to give the title compound as a tan oil. MS (ES) m/e 534.8 [M+H]⁺.

10

Examples 154-180

Using the general procedure outlined in Example 565, the following compounds were prepared.

#	structure	name	m/z
154		5-chloro-3-(3-chloro-4-fluorophenyl)-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	569.0
155		3-[3,5-bis(trifluoromethyl)phenyl]-5-chloro-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	652.0
156		5-chloro-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-3-(2-naphthalenyl)-2-thiophenesulfonamide	566.8
157		5-chloro-3-(3,5-difluorophenyl)-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	553.2
158		3-[5-chloro-2-([(3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]amino)sulfonyl)-3-thienyl]benzoic acid	xx
159		5-chloro-3-(3-chlorophenyl)-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	551.0
160		5-chloro-3-(3-fluorophenyl)-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	535.0

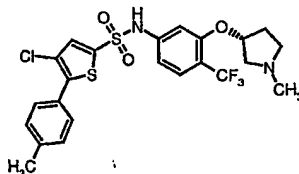
161		5-chloro-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-3-[3-[(trifluoromethyl)oxy]phenyl]-2-thiophenesulfonamide	601.0
162		3-(3-acetylphenyl)-5-chloro-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	559.0
163		5-chloro-3-(3,4-dichlorophenyl)-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	584.6
164		5-chloro-3-(4-methyl-3-nitrophenyl)-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	575.8
165		3-[3,4-bis(methoxy)phenyl]-5-chloro-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	577.0
166		5-chloro-3-(3,5-dichlorophenyl)-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	584.8
167		5-chloro-3-(3-fluoro-4-methylphenyl)-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	549.0
168		5-chloro-3-(3,4-difluorophenyl)-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	553.0

169		5-chloro-3-(3,4-dimethylphenyl)-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	545.0
170		3-(1,3-benzodioxol-5-yl)-5-chloro-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	561.0
171		5-chloro-4-(3-chloro-4-fluorophenyl)-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	569.0
172		5-chloro-4-(3,4-dichlorophenyl)-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	584.6
173		4-[3,4-bis(methoxy)phenyl]-5-chloro-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	577.0
174		5-chloro-4-(3,5-dichlorophenyl)-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	586.8
175		5-chloro-4-(3,4-difluorophenyl)-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	552.8
176		5-chloro-4-(4-methyl-3-nitrophenyl)-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	576.0

177		5-chloro-N-(4-chloro-3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-3-(3-cyanophenyl)-2-thiophenesulfonamide	508
178		5-chloro-N-(4-chloro-3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-3-[3-(methoxy)phenyl]-2-thiophenesulfonamide	513
179		5-chloro-N-(4-chloro-3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-3-(3-chlorophenyl)-2-thiophenesulfonamide	517
180		5-chloro-N-(4-chloro-3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-3-(3-fluorophenyl)-2-thiophenesulfonamide	501

Example 181

4-chloro-5-(4-methylphenyl)-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide:



5

To a solution of the product of Example 89 (0.1 g, 0.21 mmol) and (4-methylphenyl)boronic acid (46 mg, 0.30 mmol) in dry THF (2 ml) was added potassium fluoride (36 mg, 0.60 mmol), tris(dibenzylideneacetone)dipalladium (9.6 mg, 10 mol %) and tri-tertbutylphosphine-tetrafluoroborate (12 mg, 20 mol %). The reaction mixture was placed under an argon atmosphere and was heated to 60°C for 16 hours. The solvent was removed by evaporation and the residue was dissolved in DMSO, filtered, and purified by preparative HPLC (YMC CombiPrep ODS-A, 50 × 20 mm, 20 mL/min, A: acetonitrile B: water, A: 10 to 90% over 10 min, UV detection at 214 nm) to give 50 mg (42% yield) of the title compound as an oil. MS (ES) m/e 531 [M+H]⁺.

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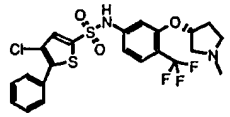
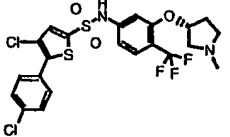
The hydrochloride salt was formed from by dissolving the substrate in methanol, adding hydrochloric acid in ether (1M) and evaporating the volatile materials to give a solid.

Examples 182-197

5 Using the general procedure outlined in Example 181, the following compounds were prepared.

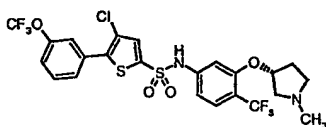
#	structure	name	m/z
182		4-chloro-5-[3-(methoxy)phenyl]-N-[3-[[[(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	548.0
183		4-chloro-5-[4-(methoxy)phenyl]-N-[3-[[[(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	546.8
184		4-chloro-5-(4-fluorophenyl)-N-[3-[[[(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	535.0
185		4-chloro-5-(4-cyanophenyl)-N-[3-[[[(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	542.2
186		4-chloro-5-[2-(methoxy)phenyl]-N-[3-[[[(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	547.2
187		4-chloro-5-(2-methylphenyl)-N-[3-[[[(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	531.0

188		4-chloro-5-(2-fluorophenyl)-N-[3- {[(3R)-1-methyl-3-pyrrolidinyl]oxy}- 4-(trifluoromethyl)phenyl]-2- thiophenesulfonamide	535.0
189		N-{3-[3-chloro-5-({[3-(((3R)-1- methyl-3-pyrrolidinyl]oxy)-4- (trifluoromethyl)phenyl]amino}sulfonyl)-2-thienyl]phenyl}acetamide	573.8
190		4-chloro-N-[3-{{{(3R)-1-methyl-3- pyrrolidinyl]oxy}-4- (trifluoromethyl)phenyl}-5-[3- (trifluoromethyl)phenyl]-2- thiophenesulfonamide	584.8
191		4-chloro-5-(3-methylphenyl)-N-[3- {[(3R)-1-methyl-3-pyrrolidinyl]oxy}- 4-(trifluoromethyl)phenyl]-2- thiophenesulfonamide	531.0
192		5-(3-acetylphenyl)-4-chloro-N-[3- {[(3R)-1-methyl-3-pyrrolidinyl]oxy}- 4-(trifluoromethyl)phenyl]-2- thiophenesulfonamide	559.0
193		4-chloro-5-(3-cyanophenyl)-N-[3- {[(3R)-1-methyl-3-pyrrolidinyl]oxy}- 4-(trifluoromethyl)phenyl]-2- thiophenesulfonamide	542.0
194		4-chloro-5-(3,4-dimethylphenyl)-N- [3-{{{(3R)-1-methyl-3- pyrrolidinyl]oxy}-4- (trifluoromethyl)phenyl]-2- thiophenesulfonamide	545.0
195		4-chloro-5-(2,4-difluorophenyl)-N-[3- {[(3R)-1-methyl-3-pyrrolidinyl]oxy}- 4-(trifluoromethyl)phenyl]-2- thiophenesulfonamide	552.8

196		4-chloro-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-5-phenyl-2-thiophenesulfonamide	517.2
197		4-chloro-5-(4-chlorophenyl)-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	550.8

Example 198

4-chloro-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-5-(3-[(trifluoromethoxy)oxy]phenyl)-2-thiophenesulfonamide:



5

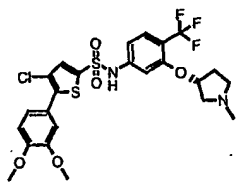
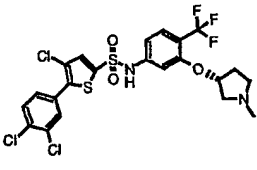
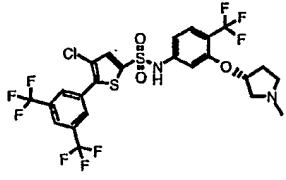
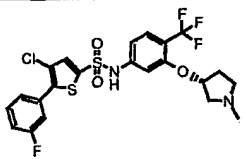
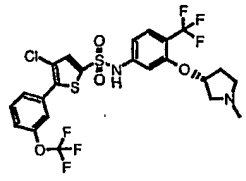
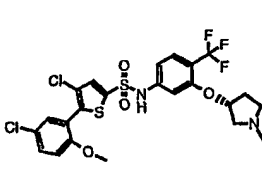
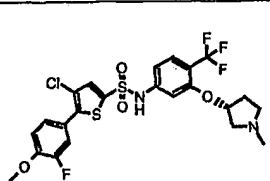
To a solution of 4,5-dichloro-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide (100 mg, 0.21 mmol) and 3-(trifluoromethoxy)benzene boronic acid (48 mg, 0.23 mmol) in anhydrous THF was added potassium fluoride (36 mg, 0.63 mmol), tri-tertbutylphosphine-tetrafluoroborate (6.1 mg, 10 mol %), and tris(dibenzylideneacetone)dipalladium (4.8 mg, 5 mol %). The reaction mixture was placed under argon atmosphere and heated to 120 °C in the microwave for 600 sec. The solvent was removed by evaporation and the residue was purified by preparative HPLC (Xterra Prep RP, 75 × 30 mm, 25 mL/min, A: acetonitrile B: water, 0.1% TFA; A: 10 to 90% during 10 min, UV detection at 214 nm) to give 12 mg (9%) of the title compound as a free base.

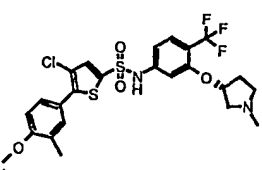
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The hydrochloride salt was formed from by dissolving the substrate in methanol, adding hydrochloric acid in ether (1M) and evaporating the volatile materials to give a solid.

Examples 199-206

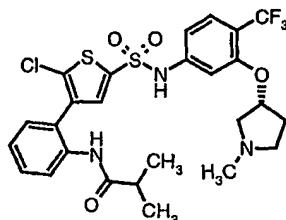
20 Using the general procedure outlined in Example 198, the following compounds were prepared.

#	structure	name	m/z
199		5-[3,4-bis(methyloxy)phenyl]-4-chloro-N-[3-[[[(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	577.0
200		4-chloro-5-(3,4-dichlorophenyl)-N-[3-[[[(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	585.0
201		5-[3,5-bis(trifluoromethyl)phenyl]-4-chloro-N-[3-[[[(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	653.0
202		4-chloro-5-(3-fluorophenyl)-N-[3-[[[(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	534.6
203		4-chloro-N-[3-[[[(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-5-{3-[[[(trifluoromethyl)oxy]phenyl]-2-thiophenesulfonamide	601.2
204		4-chloro-5-[5-chloro-2-(methyloxy)phenyl]-N-[3-[[[(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	581.2
205		4-chloro-5-[3-fluoro-4-(methyloxy)phenyl]-N-[3-[[[(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	565.0

206		4-chloro-5-[3-methyl-4-(methoxy)phenyl]-N-[3-[[3-(trifluoromethyl)phenyl]-2-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide	561.0
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Example 207

N-[3-[2-chloro-5-([3-[[3-(3*R*)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]amino)sulfonyl]-3-thienyl]phenyl]-2-methylpropanamide



5

A solution of 4-bromo-5-chloro-*N*-[3-[[3-(3*R*)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide (676 mg, 1.30 mmol), (3-aminophenyl)boronic acid (200 mg, 1.30 mmol), and [1,1'-

10

bis(diphenylphosphino)ferrocene]dichloropalladium (II) complex with dichloromethane (100 mg, 0.13 mmol) in dioxane (5 mL) and aqueous 2 M sodium carbonate (1.3 mL, 2.6 mmol) was heated in a Personal Chemistry microwave reactor at normal power for 300 sec at 170 °C. The mixture was filtered through a 0.45 µm fritted funnel and purified by preparative HPLC [YMC CombiPrep ODS-A, 50 x 20 mm, 20 mL/min, A: acetonitrile (with 0.1% trifluoroacetic acid added), B: water (with 0.1% trifluoroacetic acid added), A: 10 to 90% over 10 min, UV

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detection at 214 nm] to give 4-(3-aminophenyl)-5-chloro-*N*-[3-[[3-(3*R*)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide (311 mg, 45%) as a trifluoroacetate salt. MS (ES) *m/e* 532.2 [M+H]⁺.

20

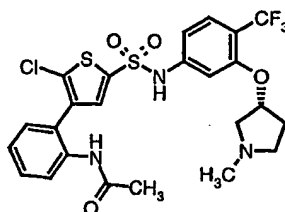
To a solution of 4-(3-aminophenyl)-5-chloro-*N*-[3-[[3-(3*R*)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide (50 mg, 0.077 mmol) and triethylamine (23 mg, 0.23 mmol) in methylene chloride (1 mL) was added isobutyryl chloride (25 mg, 0.23 mmol). The reaction was maintained for 16 h at room temperature before being quenched with methanol. The solution was concentrated and the crude material purified by preparative HPLC [YMC CombiPrep ODS-A, 50 x 20 mm, 20 mL/min, A: acetonitrile (with 0.1% trifluoroacetic acid added), B: water (with 0.1% trifluoroacetic acid added), A: 10 to 90% over 10 min, UV

25

detection at 214 nm] to provide the desired product (15 mg, 27%) as a trifluoroacetate salt. MS (ES) m/e 601.8 $[M+H]^+$.

Example 208

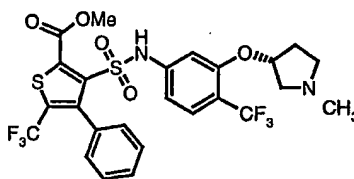
5 *N*-{2-[2-chloro-5-({[3-{{(3*R*)-1-methylpyrrolidin-3-yl}oxy}-4-(trifluoromethyl)phenyl]amino)sulfonyl]-3-thienyl]phenyl}acetamide



To a solution of 4-(2-aminophenyl)-5-chloro-*N*-[3-{{(3*R*)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide (18 mg, 0.024 mmol) and triethylamine (12 mg, 0.12 mmol) in methylene chloride (1 mL) was added acetic anhydride (2.5 mg, 0.024 mmol). The reaction was maintained at room temperature for 16 h. The solution was concentrated under reduced pressure and the remaining residue purified by preparative HPLC [YMC CombiPrep ODS-A, 50 x 20 mm, 20 mL/min, A: acetonitrile (with 0.1% trifluoroacetic acid added), B: water (with 0.1% trifluoroacetic acid added), A: 10 to 90% over 10 min, UV detection at 214 nm] to give the desired product (7 mg, 42%) as a trifluoroacetate salt. MS (ES) m/e 574.2 $[M+H]^+$.

Example 209

20 Methyl 3-({[3-{{(3*R*)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]amino)sulfonyl}-4-phenyl-5-(trifluoromethyl)-2-thiophenecarboxylate:



Aniline CF₃ (80 mg, 0.31 mmol) was dissolved in 2 mL of methylene chloride and treated with methyl 3-(chlorosulfonyl)-4-phenyl-5-(trifluoromethyl)-2-thiophenecarboxylate (118 mg, 0.307 mmol) and pyridine (0.025 mL, 0.31 mmol) with vigorous stirring at room temperature. The reaction mixture was maintained for 18 hours, and then the solvent was removed under reduced pressure. The residue was dissolved in 1 mL of DMSO and purified by preparative HPLC (YMC CombiPrep ODS-A, 50 x 20 mm, 20 mL/min, A: acetonitrile B: water, A: 5% to 95%

during 12 min, UV detection at 214 nm) to give 58 mg (31%) of the title compound as a tan solid. MS (ES) m/e 609 $[M+H]^+$

Examples 210-214

- 5 The following examples were prepared according to the representative procedure in Example 209 using the appropriate sulfonyl chlorides as starting material, and in some cases using acetonitrile rather than methylene chloride as the solvent.

#	structure	name	m/z
210		N-[3-({[(3R)-1-methyl-3-(trifluoromethyl)phenyl]-4-phenyl-5-(trifluoromethyl)-3-thiophenesulfonyl]oxy}-4-(trifluoromethyl)phenyl]-5-(2-methyl-1,3-thiazol-4-yl)-2-thiophenesulfonamide	551
211		N-[3-({[(3R)-1-methyl-3-(trifluoromethyl)phenyl]-5-[1-methyl-5-(trifluoromethyl)-1H-pyrazol-3-yl]-2-thiophenesulfonyl]oxy}-4-(trifluoromethyl)phenyl]-5-(2-methyl-1,3-thiazol-4-yl)-2-thiophenesulfonamide	555
212		3-(3-cyanophenyl)-N-[3-({[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl)-2-thiophenesulfonyl]-2-thiophenesulfonamide	508
213		4-(3-cyanophenyl)-N-[3-({[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl)-2-thiophenesulfonyl]-2-thiophenesulfonamide	508
214		N-[3-({[(3R)-1-methyl-3-(trifluoromethyl)phenyl]-5-(2-methyl-1,3-thiazol-4-yl)-2-thiophenesulfonyl]oxy}-4-(trifluoromethyl)phenyl]-5-(2-methyl-1,3-thiazol-4-yl)-2-thiophenesulfonamide	504

EXAMPLE 215

Formulations for pharmaceutical use incorporating compounds of the present invention can be prepared in various forms and with numerous excipients. Examples of such formulations are given below.

5

<u>Tablets/Ingredients</u>	<u>Per Tablet</u>
1.Active ingredient (Cpd of Form. I)	40 mg
2.Corn Starch	20 mg
10 3.Alginic acid	20 mg
4.Sodium Alginate	20 mg
5.Mg stearate	<u>1.3 mg</u> 2.3 mg

15 Procedure for tablets:

Step 1: Blend ingredients No. 1, No. 2, No. 3 and No. 4 in a suitable mixer/blender.

Step 2: Add sufficient water portion-wise to the blend from Step 1 with careful mixing after each addition. Such additions of water and mixing until the mass is of a consistency to permit its conversion to wet granules.

20 Step 3: The wet mass is converted to granules by passing it through an oscillating granulator using a No. 8 mesh (2.38 mm) screen.

Step 4: The wet granules are then dried in an oven at 140°F (60°C) until dry.

Step 5: The dry granules are lubricated with ingredient No. 5.

Step 6: The lubricated granules are compressed on a suitable tablet press.

25

Inhalant Formulation

A compound of Formula I, (1 mg to 100 mg) is aerosolized from a metered dose inhaler to deliver the desired amount of drug per use.

Parenteral Formulation

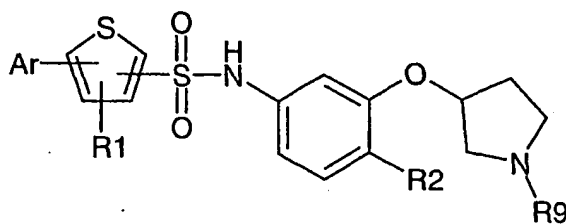
30 A pharmaceutical composition for parenteral administration is prepared by dissolving an appropriate amount of a compound of formula I in polyethylene glycol with heating. This solution is then diluted with water for injections Ph Eur. (to 100 ml). The solution is then sterilized by filtration through a 0.22 micron membrane filter and sealed in sterile containers.

The above specification and Examples fully disclose how to make and use the
35 compounds of the present invention. However, the present invention is not limited to the

particular embodiments described hereinabove, but includes all modifications thereof within the scope of the following claims. The various references to journals, patents and other publications which are cited herein comprise the state of the art and are incorporated herein by reference as though fully set forth.

What is claimed is:

1. A compound of Formula (I)



Formula (I)

wherein:

R₁ is hydrogen, halogen, or C₁₋₆ alkyl;

Ar is phenyl, pyrazolyl, thiazolyl, dibenzofuranyl, benzodioxolyl, quinolinyl, or naphthalenyl,

all of which may be substituted or unsubstituted by one or two of the following: halogen, CN, S(C₁₋₆ alkyl), CF₃, OCF₃, SCF₃, C₁₋₆ alkyl, Ph, OPh, C₁₋₆ alkoxy, CO₂(C₁₋₆ alkyl), NR₅R₆, NR₅COR₆, CONR₅R₆, COR₅, NO₂, C₁₋₃ alkylenedioxy, CH₂OH or CH₂CN;

R₂ is hydrogen, halogen, or CF₃.

R₅ and R₆ are independently hydrogen or C₁₋₆ alkyl;

R₉ is hydrogen or C₁₋₆ alkyl;

or a pharmaceutically acceptable salt thereof.

2. A compound of Claim 1 wherein:

Ar is phenyl; substituted or unsubstituted by one or two of the following: hydrogen, CN, halogen, CF₃, CO₂CH₃, C₁₋₂alkoxy, C=O, NHCOCH₃, CH₂O, C₁₋₂alkyl, SCH₃, OCF₃, CH₂CN, -C(CH₃)₃, NH₃, Ph, OPh, NO₂, CH₂OH, or N-C(O)O-CH(CH₃)₃;

R₂ is hydrogen, Cl, or CF₃;

R₁ is hydrogen, Br, or Cl; and

R₉ is C₁₋₂ alkyl.

3. A compound of claim 1 selected from:

5-chloro-3-(4-cyanophenyl)-N-[3-[[[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;

- 3-(4-acetylphenyl)-5-chloro-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-chloro-3-(4-chlorophenyl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5 5-chloro-3-[4-(methyloxy)phenyl]-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-chloro-3-(4-formylphenyl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- N-{4-[5-chloro-2-{{[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]amino}sulfonyl}-3-thienyl]phenyl}acetamide; ;
- 10 5-chloro-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-4-[4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 4-(4-acetylphenyl)-5-chloro-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 15 5-chloro-4-(4-fluorophenyl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-chloro-4-[4-(methyloxy)phenyl]-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- N-{4-[2-chloro-5-{{[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]amino}sulfonyl}-3-thienyl]phenyl}acetamide; ;
- 20 5-chloro-4-(2,4-dichlorophenyl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-chloro-4-(2,4-difluorophenyl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 25 N-{3-[5-chloro-2-{{[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]amino}sulfonyl}-3-thienyl]phenyl}acetamide;
- 5-chloro-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-3-[4-(methylthio)phenyl]-2-thiophenesulfonamide;
- 5-chloro-4-[4-(1,1-dimethylethyl)phenyl]-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 30 5-chloro-4-[4-(dimethylamino)phenyl]-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 4-chloro-N-(4-chloro-3-{{[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}phenyl]-5-[3-fluoro-4-(methyloxy)phenyl]-2-thiophenesulfonamide;

- 4-chloro-N-(4-chloro-3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}phenyl)-5-(2-fluorophenyl)-2-thiophenesulfonamide;
- 5-chloro-N-(4-chloro-3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}phenyl)-4-(4-cyanophenyl)-2-thiophenesulfonamide;
- 5 5-chloro-N-(4-chloro-3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}phenyl)-4-(4-chlorophenyl)-2-thiophenesulfonamide;
- 5-chloro-N-(4-chloro-3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}phenyl)-4-(4-fluorophenyl)-2-thiophenesulfonamide;
- 5-chloro-N-(4-chloro-3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}phenyl)-4-[3-
- 10 (trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-chloro-N-(4-chloro-3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}phenyl)-4-(3-chlorophenyl)-2-thiophenesulfonamide;
- 5-chloro-N-(4-chloro-3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}phenyl)-4-[3-(methyloxy)phenyl]-2-thiophenesulfonamide;
- 15 5-Chloro-4-(2-methylphenyl)-N-[3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-chloro-4-(2,5-dimethylphenyl)-N-[3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-chloro-4-[2-(methyloxy)phenyl]-N-[3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-
- 20 (trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-chloro-N-[3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl]-4-[4-[(trifluoromethyl)oxy]phenyl]-2-thiophenesulfonamide;
- 5-chloro-4-[2-methyl-4-(methyloxy)phenyl]-N-[3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 25 4-[3,4-bis(methyloxy)phenyl]-5-chloro-N-(4-chloro-3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}phenyl)-2-thiophenesulfonamide;
- 5-chloro-N-(4-chloro-3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}phenyl)-4-[2-methyl-4-(methyloxy)phenyl]-2-thiophenesulfonamide;
- 5-chloro-4-[4-(hydroxymethyl)phenyl]-N-[3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-
- 30 (trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-chloro-4-[3-(hydroxymethyl)phenyl]-N-[3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 4-(4-aminophenyl)-5-chloro-N-[3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;

- 4-(2-aminophenyl)-5-chloro-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-chloro-N-(4-chloro-3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}phenyl)-4-[2-(cyanomethyl)phenyl]-2-thiophenesulfonamide;
- 5 N-(4-bromo-3-{{(3R)-1-methylpyrrolidin-3-yl}oxy}phenyl)-5-chloro-4-(3-chloro-4-fluorophenyl)thiophene-2-sulfonamide;
- 4-chloro-5-[3-(cyanomethyl)phenyl]-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 4-chloro-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-5-[4-10 [(trifluoromethyl)oxy]phenyl]-2-thiophenesulfonamide;
- 4-chloro-5-[2-methyl-8-(methyloxy)-5-quinoliny]-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- N-{3-[5-({[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]amino)sulfonyl]-2-thienyl}phenyl}acetamide;
- 15 N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-5-[4-((trifluoromethyl)oxy)phenyl]-2-thiophenesulfonamide;
- 5-[2-(cyanomethyl)phenyl]-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 4-chloro-N-(4-chloro-3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}phenyl)-5-(4-chlorophenyl)-2-20 thiophenesulfonamide;
- 5-[3,5-bis(trifluoromethyl)phenyl]-4-chloro-N-(4-chloro-3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}phenyl)-2-thiophenesulfonamide;
- 4-chloro-N-(4-chloro-3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}phenyl)-5-(4-fluorophenyl)-2-thiophenesulfonamide;
- 25 4-chloro-N-(4-chloro-3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}phenyl)-5-[4-(methyloxy)phenyl]-2-thiophenesulfonamide;
- 4-chloro-N-(4-chloro-3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}phenyl)-5-(2-methylphenyl)-2-thiophenesulfonamide;
- 4-chloro-N-(4-chloro-3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}phenyl)-5-[2-methyl-4-30 (methyloxy)phenyl]-2-thiophenesulfonamide;
- 4-chloro-N-(4-chloro-3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}phenyl)-5-(4-cyanophenyl)-2-thiophenesulfonamide;
- 4-chloro-N-(4-chloro-3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}phenyl)-5-[3-((trifluoromethyl)oxy)phenyl]-2-thiophenesulfonamide;

- 5-[3,4-bis(methyloxy)phenyl]-4-chloro-N-(4-chloro-3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}phenyl)-2-thiophenesulfonamide;
4-chloro-N-(4-chloro-3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}phenyl)-5-[2-(cyanomethyl)phenyl]-2-thiophenesulfonamide;
5 5-(3-cyanophenyl)-N-[3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
4-bromo-2-chloro-N-[3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl]-5-[3-(trifluoromethyl)phenyl]-3-thiophenesulfonamide;
5-chloro-N-[3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl]-3-phenyl-2-
10 thiophenesulfonamide;
5-chloro-3-[3-(methyloxy)phenyl]-N-[3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
5-chloro-3-(4-fluorophenyl)-N-[3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
15 3-[3,5-bis(trifluoromethyl)phenyl]-5-chloro-N-[3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
5-chloro-3-(3-fluorophenyl)-N-[3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
3-(3-acetylphenyl)-5-chloro-N-[3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
20 3-[3,4-bis(methyloxy)phenyl]-5-chloro-N-[3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
5-chloro-3-(3,5-dichlorophenyl)-N-[3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
25 5-chloro-3-(3-fluoro-4-methylphenyl)-N-[3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
5-chloro-3-(3,4-difluorophenyl)-N-[3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
5-chloro-3-(3,4-dimethylphenyl)-N-[3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
30 3-(1,3-benzodioxol-5-yl)-5-chloro-N-[3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
5-chloro-4-(3,5-dichlorophenyl)-N-[3-{[(3R)-1-methyl-3-pyrrolidinyl]oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;

- 4-chloro-5-(4-methylphenyl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 4-chloro-5-[2-(methyloxy)phenyl]-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5 4-chloro-5-(2-fluorophenyl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 4-chloro-5-(3,4-dimethylphenyl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 4-chloro-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-5-phenyl-2-
- 10 thiophenesulfonamide;
- 4-chloro-5-[5-chloro-2-(methyloxy)phenyl]-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 4-chloro-5-[3-methyl-4-(methyloxy)phenyl]-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 15 N-[3-[2-chloro-5-{{[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]amino}sulfonyl)-3-thienyl]phenyl]-2-methylpropanamide;
- N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-5-[1-methyl-5-(trifluoromethyl)-1H-pyrazol-3-yl]-2-thiophenesulfonamide;
- 4-(3-cyanophenyl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-
- 20 thiophenesulfonamide;

4. A compound of claim 1 selected from:

- 5-chloro-N-(4-chloro-3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}phenyl)-4-(3,5-dichlorophenyl)-2-
- thiophenesulfonamide;
- 25 5-chloro-4-(4-cyanophenyl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-chloro-4-(4-chlorophenyl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-chloro-4-(4-formylphenyl)-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-
- 30 (trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-chloro-4-[2-(cyanomethyl)phenyl]-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-chloro-3-[3-(cyanomethyl)phenyl]-N-[3-{{(3R)-1-methyl-3-pyrrolidinyl}oxy}-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;

- 5-chloro-N-(4-chloro-3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-4-(3,4-difluorophenyl)-2-thiophenesulfonamide;
- 5-chloro-4-(2,5-difluorophenyl)-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5 5-chloro-4-(2-chlorophenyl)-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-chloro-4-[5-chloro-2-(methoxy)phenyl]-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-chloro-4-(6-methyl-1,3-benzodioxol-5-yl)-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 10 5-chloro-N-(4-chloro-3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-4-(3,4-dichlorophenyl)-2-thiophenesulfonamide;
- 5-chloro-4-(3-chloro-4-fluorophenyl)-N-(4-chloro-3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-2-thiophenesulfonamide;
- 15 5-chloro-N-(4-chloro-3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-4-(6-methyl-1,3-benzodioxol-5-yl)-2-thiophenesulfonamide;
- 5-chloro-N-(4-chloro-3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-4-(4-methyl-3-nitrophenyl)-2-thiophenesulfonamide;
- 4-chloro-5-[2-(cyanomethyl)phenyl]-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 20 4-chloro-5-[4-(cyanomethyl)phenyl]-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 4-chloro-5-[2-methyl-4-(methoxy)phenyl]-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 25 4-chloro-5-(5-methyl-1,3-benzodioxol-4-yl)-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-dibenzo[b,d]furan-4-yl-N-[3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-(3-acetylphenyl)-4-chloro-N-(4-chloro-3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-2-thiophenesulfonamide;
- 30 4-chloro-N-(4-chloro-3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-5-[3-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 4-chloro-N-(4-chloro-3-([(3R)-1-methyl-3-pyrrolidinyl]oxy)phenyl)-5-(3-fluorophenyl)-2-thiophenesulfonamide;

- 4-chloro-N-(4-chloro-3-[[(3R)-1-methyl-3-pyrrolidinyl]oxy]phenyl)-5-(3-cyanophenyl)-2-thiophenesulfonamide;
- 4-chloro-N-(4-chloro-3-[[(3R)-1-methyl-3-pyrrolidinyl]oxy]phenyl)-5-[3-(methoxy)phenyl]-2-thiophenesulfonamide;
- 5 4-chloro-N-(4-chloro-3-[[(3R)-1-methyl-3-pyrrolidinyl]oxy]phenyl)-5-(6-methyl-1,3-benzodioxol-5-yl)-2-thiophenesulfonamide;
- 4-chloro-N-(4-chloro-3-[[(3R)-1-methyl-3-pyrrolidinyl]oxy]phenyl)-5-(2,4-difluorophenyl)-2-thiophenesulfonamide;
- 4-chloro-N-(4-chloro-3-[[(3R)-1-methyl-3-pyrrolidinyl]oxy]phenyl)-5-(3,4-dichlorophenyl)-2-10 thiophenesulfonamide;
- 4-chloro-N-(4-chloro-3-[[(3R)-1-methyl-3-pyrrolidinyl]oxy]phenyl)-5-(3-chlorophenyl)-2-thiophenesulfonamide;
- 4-chloro-5-(3-chloro-4-fluorophenyl)-N-(4-chloro-3-[[(3R)-1-methyl-3-pyrrolidinyl]oxy]phenyl)-2-thiophenesulfonamide;
- 15 4-bromo-2-chloro-N-[3-[[(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-5-phenyl-3-thiophenesulfonamide;
- 5-chloro-N-[3-[[(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-4-phenyl-2-thiophenesulfonamide;
- 5-chloro-3-(3-cyanophenyl)-N-[3-[[(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 20 5-chloro-N-[3-[[(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-3-[3-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-chloro-3-(3-chloro-4-fluorophenyl)-N-[3-[[(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 25 5-chloro-3-(4-methyl-3-nitrophenyl)-N-[3-[[(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-chloro-4-(3-chloro-4-fluorophenyl)-N-[3-[[(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-chloro-4-(3,4-dichlorophenyl)-N-[3-[[(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 30 4-[3,4-bis(methoxy)phenyl]-5-chloro-N-[3-[[(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-chloro-4-(3,4-difluorophenyl)-N-[3-[[(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;

- 5-chloro-4-(4-methyl-3-nitrophenyl)-N-[3-[[3-(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 4-chloro-5-[3-(methyloxy)phenyl]-N-[3-[[3-(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5 4-chloro-5-[4-(methyloxy)phenyl]-N-[3-[[3-(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 4-chloro-5-(4-fluorophenyl)-N-[3-[[3-(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 4-chloro-5-(4-cyanophenyl)-N-[3-[[3-(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 10 4-chloro-5-(2-methylphenyl)-N-[3-[[3-(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 4-chloro-N-[3-[[3-(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-5-[3-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 15 4-chloro-5-(3-methylphenyl)-N-[3-[[3-(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-(3-acetylphenyl)-4-chloro-N-[3-[[3-(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 4-chloro-5-(3-cyanophenyl)-N-[3-[[3-(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 20 4-chloro-5-(2,4-difluorophenyl)-N-[3-[[3-(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 4-chloro-5-(4-chlorophenyl)-N-[3-[[3-(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 25 5-[3,4-bis(methyloxy)phenyl]-4-chloro-N-[3-[[3-(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 4-chloro-5-(3,4-dichlorophenyl)-N-[3-[[3-(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 5-[3,5-bis(trifluoromethyl)phenyl]-4-chloro-N-[3-[[3-(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 30 4-chloro-5-(3-fluorophenyl)-N-[3-[[3-(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide;
- 4-chloro-N-[3-[[3-(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-5-[3-[[3-(trifluoromethyl)oxy]phenyl]-2-thiophenesulfonamide; and

4-chloro-5-[3-fluoro-4-(methyloxy)phenyl]-N-[3-[[[(3R)-1-methyl-3-pyrrolidinyl]oxy]-4-(trifluoromethyl)phenyl]-2-thiophenesulfonamide.

5 5. A pharmaceutical composition comprising a compound of formula (I) of claim 1 and a pharmaceutically acceptable carrier or excipient.

6. A method of treating conditions associated with Urotensin-II imbalance by antagonizing the Urotensin-II receptor which comprises administering to a patient in need thereof, a compound of Formula I of claim 1.

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7. A method according to Claim 6 wherein the disease is congestive heart failure, stroke, ischemic heart disease, angina, myocardial ischemia, cardiac arrhythmia, essential and pulmonary hypertension, renal disease, acute and chronic renal failure, end stage renal disease, peripheral vascular disease, male erectile dysfunction, diabetic retinopathy, intermittent
15 claudication/ischemic limb disease, ischemic/hemorrhagic stroke, COPD, restenosis, asthma, neurogenic inflammation, migraine, metabolic vasculopathies, bone/cartilage/joint diseases, arthritis and other inflammatory diseases, fibrosis, pulmonary fibrosis, sepsis, atherosclerosis, dyslipidemia, addiction, schizophrenia, cognitive disorders, Alzheimers disease, impulsivity, anxiety, stress, depression, parkinsons, movement disorders, sleep-wake cycle, incentive.
20 motivation, pain, neuromuscular function, diabetes, gastric reflux, gastric motility disorders, ulcers and genitourinary diseases.